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

December 8, 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: RE-ISSUE - PRAIRIE ISLAND NUCLEAR GENERATING PLANT – INTEGRATED INSPECTION REPORT 05000282/2022002 AND 05000306/2022002

Dear Mr. Domingos:

The U.S. Nuclear Regulatory Commission (NRC) identified that the inspection report sent to you on August 11, 2022 (ML22222A173), contained minor errors in the documentation of the inspection finding and violation. We corrected the minor errors and are issuing the report in its entirety. These changes do not affect the technical content of the report.

On June 30, 2022, the NRC completed an inspection at Prairie Island Nuclear Generating Plant. On July 22, 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.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation 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 Kozak, Laura
on 12/08/22

Laura L. Kozak, Acting Chief
Reactor Projects Branch 3
Division of Operating Reactor Safety

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

Enclosure:
As stated

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Letter to Christopher P. Domingos from Laura L. Kozak dated December 8, 2022.

SUBJECT: RE-ISSUE - PRAIRIE ISLAND NUCLEAR GENERATING PLANT – INTEGRATED INSPECTION REPORT 05000282/2022002 AND 05000306/2022002

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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:	05000282/2022002 and 05000306/2022002
Enterprise Identifier:	I-2022-002-0054
Licensee:	Northern States Power Company
Facility:	Prairie Island Nuclear Generating Plant
Location:	Welch, Minnesota
Inspection Dates:	April 01, 2022, to June 30, 2022
Inspectors:	S. Bell, Health Physicist K. Pusateri, Resident Inspector D. Tesar, Senior Resident Inspector
Approved By:	Laura L. Kozak, Acting Chief Reactor Projects Branch 3 Division of Operating Reactor Safety

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 Complete Required Inservice Testing Prior to Restoring Equipment to Operation			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000282,05000306/2022002-01 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, "Codes and Standards" for the failure to meet the inservice testing requirements set forth in the American Society of Mechanical Engineers (ASME) Operations and Maintenance (O&M) Code and Addenda for failure to complete required testing prior to returning equipment to operation following maintenance on the 22 diesel driven cooling water pump (DDCLP).			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 operated at or near rated thermal power for the entire inspection period.
Unit 2 operated at or near rated thermal power for the entire 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 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

71111.01 - Adverse Weather Protection

External Flooding Sample (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated that flood protection barriers, mitigation plans, procedures, and equipment are consistent with the licensee's design requirements and risk analysis assumptions for coping with external flooding on May 3, 2022.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

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

(1) Unit 1 B train safety injection system on April 22, 2022
(2) 122 control room ventilation returned to service on May 26, 2022
(3) Instrument air system walkdown on May 26, 2022

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 43, bus 111 and 121 switchgear rooms on April 4, 2022
(2) Fire Zone 19, Unit 1 auxiliary building, elevation 715' on April 7, 2022
(3) Fire Zone 26, bus 112 and train A event monitoring rooms, elevation 735' on April 22, 2022
(4) Fire Zone 96, transformer 2RX on May 3, 2022

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) Observed licensed operator requalification scenarios on May 3, 2022

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (7 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) 2RY transformer work on April 25, 2022
(2) 12 electro-hydraulic oil pump leak (potential Initiating Event) on May 2, 2022
(3) Unit 2 turbine oil cooler 2CL-27-4 on April 25, 2022
(4) SP 2857, "4kV Bus 21/22 Undervoltage and Underfrequency Relay Test (Omicron)," on May 24, 2022
(5) 12 CFCU inoperability not MRFF on May 5, 2022
(6) Work Week 2219 SI pump risk on May 10, 2022
(7) Corrective action program (CAP) 501000063397 11, "Condensate Storage Tank Leaking," on May 27, 2022

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (6 Samples)

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

(1) SP 2284, "CV-31733 Closing Time Outside of REF," on April 13, 2022
(2) AR 501000062700, "122 Control Room Air Handler," on May 2, 2022
(3) 12 CFCU unplanned inoperability on May 5, 2022
(4) Work Order 700097233, "D5 Ruskin Damper Positioner Replacement," on June 6, 2022
(5) 22 DDCLP Comprehensive Test Not Performed on April 5, 2022
(6) D5 rack differential detector CAP 501000064219

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) 122 safeguards traveling screen T-MOD on May 11, 2022
(2) 11 condensate storage tank leak repairs on May 27, 2022

71111.19 - Post-Maintenance Testing

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

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

(1) Post-maintenance testing (PMT) of MV-32033 on April 28, 2022
(2) 11 charging pump PMT on May 25, 2022
(3) PMT of circuit breaker 112E-2 on June 1, 2022
(4) Work Order (WO) 700097233, "D5 Ruskin Damper Positioner Replacement," on June 6, 2022
(5) 22 charging pump PMT on June 8, 2022
(6) 22 CC Pump Work Window and PMT, on June 29, 2022
(7) SP 2089B, "RHR Pump and Suction Valve Quarterly Test," on June 20, 2022

71111.22 - Surveillance Testing

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

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

(1) SP 1110B, "Train B Cooling Water Header Isolation Valves Quarterly Test," on April 28, 2022
(2) SP 2334, "D5 Emergency Diesel Generator 24 Hour Load Test," on May 1, 2022

(3) SP 2295, "D5 Diesel Generator 6-Month Fast Start Test," on May 1, 2022
(4) SP 2088A, "21 SI Pump Quarterly Test," on May 10, 2022
(5) SP 2307, "D6 DG 6 Month Fast Start Test," on May 23, 2022

Inservice Testing (IP Section 03.01) (1 Sample)

(1) SP 2857, "4kV Bus 21/22 Undervoltage and Underfrequency Relay Test (Omicron)," on May 26, 2022

Containment Isolation Valve Testing (IP Section 03.01)

SP 2284, "RCDT Vent Header Containment Isolation Valves Quarterly Test," on April 13, 2022

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

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

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

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Permanent Ventilation Systems (IP Section 03.01) (1 Sample)

The inspectors evaluated the configuration of the following permanently installed ventilation systems:

(1) Radioactive waste building ventilation system

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

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

(1) Temporary HEPA ventilation system on the decontamination booth 695' auxiliary building

Use of Respiratory Protection Devices (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated the licensee’s use of respiratory protection devices.

Self-Contained Breathing Apparatus for Emergency Use (IP Section 03.04) (1 Sample)

(1) The inspectors evaluated the licensee’s use and maintenance of self-contained breathing apparatuses.

71124.04 - Occupational Dose Assessment

Source Term Characterization (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated licensee performance as it pertains to radioactive source term characterization.

External Dosimetry (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated how the licensee processes, stores, and uses external dosimetry.

Internal Dosimetry (IP Section 03.03) (2 Samples)

The inspectors evaluated the following internal dose assessments:

(1) Two internal dose assessments dated 10/19/2021
(2) One internal dose assessment dated 04/23/2020

Special Dosimetric Situations (IP Section 03.04) (3 Samples)

The inspectors evaluated the following special dosimetric situations:

(1) Declared pregnant worker records dated 04/01/2020
(2) Declared pregnant worker records dated 03/05/2020
(3) Declared pregnant worker records dated 09/23/2021

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

Walkdowns and Observations (IP Section 03.01) (4 Samples)

The inspectors evaluated the following radioactive effluent systems during walkdowns:

(1) Turbine building sump effluent compositor and associated sampling lines
(2) 1R19 and 2R19 steam generator blowdown effluent monitors and sample lines
(3) 1R18 liquid waste discharge monitor and associated sample lines
(4) Unit 1 auxiliary building ventilation system including the 1R30 and 1R37 effluent monitors

71124.07 - Radiological Environmental Monitoring Program

Environmental Monitoring Equipment and Sampling (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated environmental monitoring equipment and observed collection of environmental samples (air samples, water samples and TLD locations).

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

BI02: RCS Leak Rate Sample (IP Section 02.11) (2 Samples)

(1) Unit 1 (April 1, 2021, through March 31, 2022)
(2) Unit 2 (April 1, 2021, through March 31, 2022)

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (1 Sample)

The inspectors reviewed the licensee's implementation of its CAP related to the following issues:

(1)
- The inspectors reviewed the completed corrective actions associated with voids in the Residual Heat Removal (RHR) system in the Mitigating Systems Cornerstone. The inspectors determined if the corrective actions had been completed as documented in the CAP.

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

(1) The inspectors reviewed the licensee's CAP for potential adverse trends in Operability Determinations that might be indicative of a more significant safety issue.

INSPECTION RESULTS

Failure to Complete Required Inservice Testing Prior to Restoring Equipment to Operation			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000282,05000306/2022002-01 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, "Codes and Standards" for the failure to meet the inservice testing requirements set forth in the American Society of Mechanical Engineers (ASME) Operations and Maintenance (O&M) Code and Addenda for failure to complete required testing prior to returning equipment to operation following maintenance on the 22 diesel driven cooling water pump (DDCLP).			
Description: On Saturday, March 26, 2022, the licensee performed routine maintenance on the 22 DDCLP. Upon completion of the maintenance, the licensee performed Post-Maintenance Testing (PMT) as specified in the Work Order (WO) by completing the quarterly portion of			

SP 1106B, "22 Diesel Cooling Water Pump Monthly Test," [performed at 9000 gpm] and declared the 22 DDCLP as operable.

On Monday, March 28, 2022, the Inservice Testing (IST) Engineer initiated CAP 501000061742, "Comp Not Performed After 22 DDCLP Maint," which identified the following:

1) During the maintenance, the pump was uncoupled [diesel engine uncoupled from right-angle drive] as well as other minor maintenance activities.
2) Per the ASME OM Code Subsection ISTB-3310, "Effect of Pump Replacement, Repair, and Maintenance on Reference Values," "When a reference value or set of values may have been affected by repair, replacement, or routine servicing of a pump, a new reference value or set of values shall be determined in accordance with ISTB-3300, or the previous value reconfirmed by a comprehensive or Group A test run before declaring the pump operable."
3) IST [group] was also not given a review of the WO prior to maintenance.

Subsequently, station personnel reviewed the corrective action program (CAP) initiated by the IST Engineer and made the determination through their operability process to return the DDCLP to operation based upon the data obtained from the quarterly surveillance test performed as the PMT on March 26, 2022.

The inspectors, on March 29, questioned whether it was appropriate to return the DDCLP to service, given that there was a reasonable potential for the reference values to have changed due to the maintenance performed. Therefore, the conservative action should have been to verify the applicable reference values for the pump prior to returning it to service.

Title 10 CFR 50.55(a)(1)(iv) incorporates by reference the ASME O&M Code. O&M Code subsection ISTB-3000 "General Testing Requirements," specifies the inservice testing requirements which are to be completed in accordance with (IAW) Table ISTB-3000-1. The IST required data applicable to the 22 DDCLP per Table ISTB-3000-1 are, differential pressure, flow rate, and vibration measurements.

ISTB-3540, "Vibration" - ISTB-3540(b) specifies further requirements in that, "Vibration measurements shall be taken on the upper motor bearing housing in three approximately orthogonal directions, one of which is the axial direction."

By letter L-PI-14-015 dated April 09, 2014, Prairie Island Nuclear Generating Plant (PINGP) submitted Relief Request RR-03 seeking relief from code requirement ISTB-3540(b) which required that vibration measurements be taken on the upper motor-bearing housing in three approximately orthogonal directions, one of which must be in the axial direction. In lieu of this code requirement, PINGP proposed as an alternative to take vibration measurements on the right-angle drive in three orthogonal directions, one of which being in the axial direction, as well as one additional vibration measurement to be taken on each of the diesel engines. The NRC approved this relief request by response dated December 5, 2014 (ML 14329A185).

As indicated in the CAP, ISTB-3310, "Effects of Pump Replacement, Repair, and Maintenance on Reference Values," requires that:
ISTB-3312, "When a reference value or set of reference values may have been affected by repair or routine maintenance, other than that covered under ISTB-3311, the following shall be performed before declaring the pump operable:

(a)A Group A or comprehensive test shall be performed and
(1) The previous reference values reconfirmed or
(2) A new reference value, or set of reference values, shall be determined in accordance with ISTB-3300."

The inspectors identified that because the diesel engine and right-angle drive were uncoupled and re-coupled during the maintenance, and that each of these components are locations for IST vibration data collection, that the potential existed that "a reference value or set of reference values may have been affected" by the maintenance activity. One of the purposes of performing the comprehensive test is to ensure that no unintended flaws or consequences were introduced during the performance of the maintenance. Therefore, the inspectors determined that the requirements of ISTB-3312(a)(1) (Subsection ISTB-3310) would apply to this maintenance activity, and a comprehensive test was required to have been performed prior to restoring the pump to operation.

In addition, licensee procedure H10.1 "ASME Inservice Testing Program" Section 5.6, "Establishing a New Reference Value for Pump Testing", quotes ASME OM Code, ISTB-3310 "When a reference value or set of values may have been affected by repair, replacement, or routine servicing of a pump, a new reference value or set of values shall be determined in accordance with ISTB-3300, or the previous value reconfirmed by a comprehensive or Group A test run before declaring the pump operable." Step 5.6.4 further requires that "The minimum USAR flow required for accident mitigation [10,400 gpm] shall be the limiting acceptance criteria for operability. If the flow is less than the USAR requirement, then the pump shall be declared inoperable, and the appropriate LCO condition entered."

Subsequently, on Wednesday March 31, 2022, the licensee took actions to perform the IST comprehensive pump test per the applicable portions of SP 1106B, "22 Diesel Cooling Water Pump Monthly Test." The results of this test indicated that the vibration data was similar to what was seen prior to the maintenance.

Corrective Actions: CAP 501000061742, "Comp Not Performed After 22 DDCLP Maint"

Performance Assessment:

Performance Deficiency: The licensee's failure to perform inservice testing IAW regulatory requirements in 10 CFR 50.55a, O&M Code Section 3310, and in accordance with their prescribed procedure (H10.1, "Inservice Testing") prior to returning the equipment to operation was a Performance Deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors reviewed Inspection Manual Chapter 0612 App E, "Examples of Minor Issues," and determined that this issue was most closely related to example 2.b. The inspectors determined that the violation was more than minor because the performance deficiency was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to complete the required in-service testing prior to returning the equipment to operation.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” The violation was determined to be of very low safety significance and screened to Green because inspectors answered all screening questions as "no".

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. The licensee failed to use conservative decision-making following initiation of CAP which identified that the O&M Code required performance of the comprehensive test prior to returning the equipment to operation. The licensee only performed the quarterly surveillance test to return the pump to operation. Following the CAP initiation, the licensee declared the equipment Operable and considered it available to perform its specified safety function but did not perform any kind of additional Engineering Evaluation.

Enforcement:

Violation: Title 10 CFR 50.55(a)(1)(iv) requires, in part, "When a reference value or set of values may have been affected by repair, replacement, or routine servicing of a pump, a new reference value or set of values shall be determined in accordance with ISTB-3300, or the previous value reconfirmed by a comprehensive or Group A test run before declaring the pump operable."

Contrary to the above, on March 26, 2022, the licensee returned the 22 DDCLP to operation following maintenance without completing the comprehensive pump test run.

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 Residual Heat Removal Voids Found After 2R32 Refueling Outage	71152A

Inspectors selected Unit 2 residual heat removal (RHR) voiding long term actions for this annual follow-up sample to evaluate the timely disposition of this operability issue and ensure that corrective actions are commensurate with the safety significance. Inspectors reviewed the corrective action program (CAP) documents associated with a series of voids found following the 2R32 refueling outage. The significance of the voids was that in some cases the size of particular voids found exceeded the operability limits listed in procedure H64, “Gas Accumulation Management Program.” The licensee was able to perform Operability Evaluations to determine that the voids were acceptable to maintain reasonable assurance of operability.

The licensee determined this potential gaseous intrusion mechanism was related to chemical additions to the RHR system while it was aligned in Shutdown Cooling Mode.

The licensee created actions in the CAP to revise procedures to minimize the amount of gas left in the system following Shutdown Cooling Mode. The licensee created corrective actions to perform more void inspections during subsequent outages and to have engineering ensure both RHR pumps operate prior to plant heat-up after an outage.

Inspectors noted that corrective actions associated with changing the fill and vent procedures following an outage were closed to the procedure change requests (PCRs) but then those

PCRs were subsequently cancelled. The licensee as part of their normal review process, plans to review the PCRs and add justification for the cancellation.

Since all actions are not completed and the licensee has not gone through another refueling outage, the inspectors cannot yet assess the adequacy and effectiveness of all the corrective actions.

The licensee-initiated CAP 501000064413 which created a tracking action for completion of the PCRs. The CAP has not been closed by the licensee so there is an opportunity to assess the effectiveness of all the corrective actions prior to the next RFO and CAP closure.

No findings or violations were identified during the review.

Observation: Trend Review of ASME O&M Code Compliance	71152S

Inspectors reviewed Operability determinations associated with the American Society of Mechanical Engineers (ASME) Code compliance for trending. Two examples were identified for evaluation as follows:

On October 27, 2021, a corrective action program (CAP) 501000057742, "SP 2269 Performed UNSAT," was initiated by the licensee to document the failure of 2SI-6-4 to pass its in-service testing acceptance criteria. The station performed an Operability Determination (CAP 501000057644, 500000316013) and concluded that "Valve 2SI-6-4 is not fully qualified. This is due to not meeting the leakage criteria established per the IST Code. This condition does not affect the ability of 2SI-6-4 to perform its specified safety functions....," the licensee concluded that 2SI-6-4 was "Operable."

On October 28, 2021, CAP 501000057820, "Operability Process and Regulatory Requirements," was initiated by the licensee (and related to CAP 501000057742) to document in part, that the fleet procedure FP-OP-OL-01 for Operability was updated to incorporate guidance from NEI 18-03, "Operability Determination." The guidance was not endorsed by the NRC. The CAP also documented that "the regulatory aspect of how compliance with 10 CFR 50.55a is maintained still needs to be addressed."

As documented in Inspection Report 2021-004, the NRC 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..."

On March 28, 2022, CAP 501000061742, "Comp Not Performed After 22 DDCLP Maintenance," was initiated to document the failure to perform the comprehensive test on the 22 diesel driven cooling water pump (DDCLP) following maintenance in accordance with the ASME operation and maintenance (O&M) Code requirements.

As documented in this inspection report (2022-002), the NRC identified "... a green finding and associated non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50.55a, "Codes and Standards" for the failure to meet the in-service testing requirements set forth in the American Society of Mechanical Engineers (ASME) Operations and Maintenance (O&M) Code and Addenda for failure to complete required testing prior to returning equipment to operation following maintenance on the 22 diesel driven cooling water pump (DDCLP)."

On June 20, 2022, CAP 501000064047, "2SI-6-4 and FP-OP-OL-01," was initiated. This CAP identified that during the 2022 in-service testing focused self-assessment, "It was identified that there is currently no procedure guidance in FP-OP-OL-01 or other actions in place to prevent recurrence." (allowing the plant to move forward in power ascension without following the ASME OM Code)

The inspectors reviewed the above issues and identified differences in the Xcel Energy Fleet Procedure FP-OP-OL-01, "Operability" and NRC Inspection Manual Chapter 0326 "Operability Determinations" with respect to code compliance and operability. Subsequently, the licensee-initiated fleet CAP 501000065231, "NRC insight on IMC-0326 v FP-OP-OL-01". Inspectors reviewed the CAPs and actions listed above and determined that at the time of review, there were no actions in place to address the differences between licensee procedures, NRC Inspection Manuals, and compliance with 10 CFR 50.55a Code Requirements. CAP 501000057820 had an action to provide training which was documented as complete in January of 2022; however, this action does not appear to have been effective based upon the events which occurred on March 28, 2022. CAP 501000064047 was initiated after the inspectors had started their trend review, and this CAP does capture the observations of the inspectors. Actions being implemented in this CAP may resolve the identified gaps, however, since the actions had not yet been created, inspectors were unable to assess their overall adequacy.

No new findings or violations were identified during this trend review.

EXIT MEETINGS AND DEBRIEFS

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

- On July 22, 2022, the inspectors presented the integrated inspection results to Mr. C. Domingos, Site Vice President, and other members of the licensee staff.
- On June 22, 2022, the inspectors presented the radiation protection baseline inspection results to Mr. S. Skoyen, Acting Plant Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Procedures	CY-ENVR-003	Three Day Flood Forecast Reporting	6
		SP 1293	Inspection of Flood Control Measures	27
	Work Orders	WO 700083238-0010	SP 1293 Annual Inspection of Flood Contr	06/02/2022
71111.04	Calculations	M-385-FP-001	Analysis of Record and Engineering Calculations for Cardox Piping Equivalent Length	2
	Drawings	NF-39244	Flow Diagram Instrument Air Piping Unit 1 & 2	98
	Procedures	C1.1.35-3	Checklist for Cooling Water System	45
71111.05	Fire Plans	F5 Appendix A	Fire Detection Zone 26, Bus 112 & Train A Event Monitoring Rooms El. 735'	46
		F5 Appendix A	Fire Detection Zone 43	46
		F5 Appendix A	Fire Detection Zone 19	46
		F5 Appendix A	Fire Detection Zone 96 Transformer 2RX	46
	Miscellaneous	NFPA No. 12-1972	Standard of Carbon Dioxide Extinguishing Systems	1972
		QF0739, NRC Question Response, CAP 501000063724	Pertaining to ENG-ME-804 CO2, Concentration in the Relay and Cable Spreading Room Attachment 10.1 Retrotec Final Report Cardox Validation Project	0
71111.13	Engineering Changes	EC 601000003804	11 CST: Temp Clamp for Thru-Wall Leak	0
	Procedures	SP 2857	4KYV Bus 21/22 Undervoltage and Underfrequency Relay West (Omicron)	1
	Work Orders	WO 700106197-0010	Replace O-Rings/Seals on Flex Hose Fittings	05/01/2022
71111.15	Calibration Records	ENG-ME-804	CO2 Concentration in the Relay Room and Cable Spreading Room	0
	Corrective Action Documents	AR 501000061742	Comp Not Performed after 22 DDCLP Maint	03/29/2022
	Engineering Changes	EC 602000018704	Revise SP 1091 Monthly Containment Fan Coils Units Surveillance Test	05/06/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Miscellaneous	API Standard 650	Welded Steel Tanks for Oil Storage	September 2003
		API Standard 653	Tank Inspection, Repair, Alternation, and Reconstruction	September 2003
		C1.1.19-4	Containment and Shield Building Penetration Checklist - Unit 2	53
		H10.1	ASME Inservice Testing Program	42
		H10.1.B	Inservice Testing Program Component Basis Document	6
		OMN-16	ASME Code Case OMN-16 - Use of a Pump Curve for Testing	2
		QF0739, NRC Question Response Form	Requested API 650 and API 653	06/02/2022
	Operability Evaluations	CV-31733 / SP 2284 / WO 700099357	IST 96 Hour Evaluation	04/13/2022
	Procedures	FP-OP-OL-01	Operability	22
		SP 2284	RCDT Vent Header Containment Isolation Valves Quarterly Test	20
		TP 1806	122 Control Room Chiller Inspection	18
71111.18	Drawings	Drawing NF-39220	Flow Diagram Condensate System Unit 1	82
		Drawing XH-74-56	General Plan 30-29 High Dome Roof	76
71111.19	Procedures	GMP GREE-001	CVCS Suction Stabilizer Maintenance	6
		GMP SULL-001	SULLAIR Station Air Compressor 1000 Hour Preventative Maintenance	9
		PE MCC-G7	MCC Electrical Preventive Maintenance for GE 7700 Line MCCS	44
	Work Orders	WO 700025194	PE-121C-16 BKR PM, 2TB LP B CL HDR MV-320	04/28/2022
		WO 700089255	245-042 SPD Reducer Oil Chang Smpl	06/08/2022
		WO 700093503	22 CHG PMP CVCS SUCT STABLZR MAINT	03/19/2022
		WO 700096494	PMT 125 STA AIR COMPR 1000 HR PM	05/25/2022
		WO 700096494	GMP SULL-001-125 STA AIR CMPR 1000 HR PM	05/28/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		WO 700096614	MD-32421 Insp. and Adjust Ruskin SR MD	05/28/2022
		WO 700097233	21 D5 DSL RM OA (MD-32420) RPLC POSNR	06/07/2022
		WO 700097663	MD-32422 Insp & Adjust Ruskin SR M	06/16/2022
		WO 700097663	MD-32422 Insp &n Adjust Ruskin SR M	06/16/2022
71111.22	Procedures	SP 1110B	Train B Turbine Cooling Water Header Isolation Valves Quarterly Test	7
		SP 2088A	Train A Safety Injection Quarterly Test	37
		SP 2284	RCDT Vent Header Containment Isolation Valves Quarterly Test	20
		SP 2295	D5 Diesel Generator 6 Month Fast Start Test	57
		SP 2307	D6 Diesel Generator 6 Month Fast Start Test	51
		SP 2334	D5 Diesel Generator 24 Hour Load Test	24
		SP 2857	4kV Bus 21/22 Undervoltage and Underfrequency Relay Test (Omicron)	1
	Work Orders	WO 700092735	SP2334 - D5 DG 24 Hour Load Test	03/04/2022
		WO 700095690	SP 111OB TRN B CL HDR ISOL VLVS TEST	04/28/2022
		WO 700096197	SP 2857 Bus 21/22 Undervolt Omicron	05/23/2022
		WO 700097314	SP2295 D5 DG 6MO Fast Start Test	05/01/2022
		WO 700099357	SP2284 RCDT VENT HDR CTMT ISOL VLVS QTR	04/12/2022
		WO 700099357	SP 2284 RCDT Vent HDR CTMT Isolation Valves Qtr	03/23/2022
		WO 700105218	SP2307 D6 DG Fast Start Test	05/23/2022
71124.01	Corrective Action Documents Resulting from Inspection	501000062752	Alpha Analysis	05/03/2022
	Engineering Evaluations		Prairie Island Plant Alpha Characterization Study	11/26/2021
	Radiation Surveys		2R32 Refueling Outage Radiation Surveys	Various
71124.03	ALARA Plans		2R32 Refuel Work Radiation Protection Job Plan	09/28/2021
	Miscellaneous		Four Quantitative Respirator Mask Fit Tests	05/02/2022
			Respiratory Protection Qualification Records for Day Shift Reactor Operators and Senior Reactor Operators for May 4,	Various

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2022	
			Annual SCBA Tests for Units LAD090896 and LAD090890	07/13/2021
		43525-0	Breathing Air Tests December 2021	12/09/2021
		4433895-0 and 433653-1	Breathing Air Checks for November 2021	11/15/2021
	Procedures	FP-RP-RPP-02	Respirator Fit Testing and Portacount Fit Tester Operation	1
		RPIP 1604	Breathing Air Test	17
	Self-Assessments		Inspection Procedure 71124.03	Undated
	Work Orders	7000680170020	12 Shield Building Ventilation Filter Removal Efficiency Test	08/18/2020
71124.04	Corrective Action Documents	501000047700	Improper Area TLD Changeout	01/23/2021
		501000050416	Dose Discrepancies for Period 2, 2020	04/16/2021
	Engineering Evaluations	17-005	Technical Basis Document Passive Monitoring Capability Testing	11/05/2019
		SSA 606000001052	2019 Prairie Island Isotopic Mix Evaluation	Undated
		SSA 606000001454	2021 Prairie Island Isotopic Mix Evaluation	Undated
	Miscellaneous		Three Declared Pregnant Worker Records	Various
			2021 Annual Area TLD Trending	02/21/2022
			Period 2 (July - December) 2021 Dosimetry Data	Undated
			Mirion Technologies Inc., Oak Ridge TN, NVLAP Accreditation for 07/01/2021 through 06/30/2022	
			Period 2 (July through December 2021). 2021 Dose Discrepancy Reports	Various
	Procedures	FP-RP-DR-01	Dosimetry Program	15
		FP-RP-IDA-01	Internal Dose Assessment	4
	Radiation Work Permits (RWPs)	220059	Dose Restricted Individuals	0
71124.07	Procedures	H4	Offsite Dose Calculation Manual	32
		RPIP 4721	REMP Air Sampling	22
71152A	Miscellaneous	602000018696	Adverse Condition Monitoring Plan for Unit 2 RHR Discharge Voids	01/06/2022
	Operability	POD	Prompt Operability Determination for Unit 2 Train A RHR	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Evaluations	50100000316297	Piping	