UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
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August 11, 2017

Mr. Scott D. Northard
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, UNITS 1 AND 2—NRC INTEGRATED INSPECTION REPORT 05000282/2017002 AND 05000306/2017002

Dear Mr. Northard:

On June 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. On July 13, 2017, the NRC inspectors discussed the results of this inspection with you and members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors documented two findings of very low safety significance (Green) in this report with two associated violations. Additionally, the inspectors documented one violation that was determined to be Severity Level IV under the traditional enforcement process. Because the licensee initiated condition reports to address these issues, these violations are being treated as Non-Cited Violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. Further, the inspectors documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating this violation as a NCV consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations, significance, and/or severity of any of these NCVs, 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 the Prairie Island Nuclear Generating Plant.

In addition, if you disagree with the cross-cutting aspect assignment or a finding not associated with a regulatory requirement 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 the 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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA Kenneth Riemer Acting for/

Billy Dickson
Branch 2
Division of Reactor Projects

Docket Nos. 50–282; 50–306; 72–010
License Nos. DPR–42; DPR–60; SNM–2506

Enclosure:
IR 05000282/2017002; 05000306/2017002

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Letter to Scott D. Northard from Billy Dickson dated August 11, 2017

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2—NRC INTEGRATED INSPECTION REPORT 05000282/2017002 AND 05000306/2017002

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50–282; 50–306; 72–010
License Nos:	DPR–42; DPR–60; SNM–2506
Report No:	05000282/2017002; 05000306/2017002
Licensee:	Northern States Power Company, Minnesota
Facility:	Prairie Island Nuclear Generating Plant, Units 1 and 2
Location:	Welch, MN
Dates:	April 1 through June 30, 2017
Inspectors:	L. Haeg, Senior Resident Inspector P. LaFlamme, Resident Inspector M. Garza, Emergency Preparedness Inspector J. Bozga, Senior Reactor Inspector
Approved by:	Billy Dickson, Chief Branch 2 Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY

Inspection Report 05000282/2017002, 05000306/2017002; April 1, 2017, through June 30, 2017; Prairie Island Nuclear Generating Plant, Units 1 and 2. Operability Determinations and Functionality Assessments; Correction of Emergency Preparedness (EP) Weaknesses and Deficiencies; and, Identification and Resolution of Problems.

This report covers a 3–month period of inspections by resident inspectors and announced baseline inspections by regional inspectors. One Green finding and one Severity Level IV violation were identified by the inspectors, and one Green finding was self-revealed. The findings and violation involved NCVs of U.S. Nuclear Regulatory Commission (NRC) requirements. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated November 1, 2016. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG–1649, "Reactor Oversight Process," dated July 2016.

NRC–Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a finding of very low safety significance (Green) and an associated NCV of TS 5.4.1.a, "Procedures," associated with the licensee's failure to properly implement Procedure FP–WM–MMP–01, "Minor Maintenance Process," Revision 5, while planning and performing maintenance on a steam exclusion barrier transom latch assembly. Specifically, on February 3, 2017, maintenance workers in coordination with the Fix-It-Now (FIN) Senior Reactor Operator (SRO) removed the lower latch assembly from a transom above Door 225 that rendered the steam exclusion barrier non-functional. Consequently, for an approximately five minute window during maintenance on the latch assembly, the 11 safeguards battery system was rendered inoperable with respect to a postulated turbine building High Energy Line Break (HELB) event. The licensee entered the issues into the Corrective Action Program (CAP) as CAPs 1548470 and 1549724.

The inspectors determined that the licensee's failure to properly implement procedure FP–WM–MMP–01 as required by Technical Specification (TS) 5.4.1.a. was a performance deficiency. The performance deficiency was determined to be more than minor and a finding in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Mitigating Systems Cornerstone attribute of Human Performance and affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," to this finding. Since the inspectors answered "No" to all questions within IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the finding screened as very low safety significance (Green). The inspectors determined that the performance characteristic of the finding that was the most significant causal factor of the performance deficiency was associated with the cross-cutting aspect of Teamwork in the Human Performance cross-cutting area,

and involved individuals and work groups not properly communicating and coordinating their activities within and across organizational boundaries to ensure nuclear safety was maintained. [H.4] (Section 1R15)

Cornerstone: Emergency Preparedness

Green. A self-revealed finding, and an associated NCV of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54 (q)(2), and 10 CFR 50.47 (b)(5) was identified on August 13, 2016, after a Notice of Unusual Event (NOUE) was declared due to reactor coolant system leakage greater than 25 gpm, the Shift Emergency Communicator (SEC) did not notify the States, Locals, and Tribal Community within 15 minutes of the classification.

The inspectors reviewed IMC 0612, Appendix B, and determined that the finding was more than minor because it adversely affected the Emergency Response Performance attribute of the EP cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Since the finding involved a failure to implement emergency preparedness requirements, the inspectors reviewed IMC 0609, Appendix B, Attachment 1, and determined that this was a finding of very-low significance (Green) because it involved the failure to notify the offsite response organizations as required in the Emergency Plan after the classification of an NOUE. The cause of this finding involved the cross-cutting area of human performance, with the aspect of procedure use and adherence because the SEC did not appropriately follow the notification procedure. [H.8] (Section 1EP5.1)

Cornerstone: Other

Severity Level IV. The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.72(b)(3)(ii)(B) due to the licensee's failure on March 20, 2017, to report an unanalyzed condition within eight hours of discovery. Specifically, removing the lower latch assembly of a transom above Door 225, a steam exclusion barrier, during maintenance resulted in the inoperability of the Units 1 and 2 safeguards batteries and Auxiliary Feed Water (AFW) systems, and Unit 1 safeguards bus as determined by CAP 1549724.

The inspectors determined that the failure to submit a report required by 10 CFR 50.72 for the unanalyzed condition described above was a performance deficiency. The inspectors determined that this issue had the potential to impact the regulatory process based, in part, on the information that 10 CFR 50.72 reporting serves. Since the issue impacted the regulatory process, it was dispositioned through the Traditional Enforcement process. The inspectors determined that this issue was a SL IV violation based on Example 6.9.d.9 in the NRC Enforcement Policy. Example 6.9.d.9 specifically states, "A licensee fails to make a report required by 10 CFR 50.72 or 10 CFR 50.73." Because the issue has been evaluated under the Traditional Enforcement process, there was no cross-cutting aspect associated with this violation. (Section 4OA2.3)

Licensee-Identified Violations

Violations of very low safety or security significance or SL IV that were identified by the licensee have been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. The inspectors documented one licensee-identified violation for which enforcement discretion was granted. This violation and CAP tracking number is listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 40 percent power due to ongoing surveillance testing, main condenser maintenance, and troubleshooting of 11 main feedwater pump motor elevated temperatures. Following these activities, on April 6, 2017, Unit 1 was returned to full power and operated at full power until May 21, 2017, when power was reduced to 53 percent to mitigate a hot spot on the main transformer. Following troubleshooting, Unit 1 was reduced to 7 percent on May 31, 2017, to remove the main transformer from service for repair activities. Unit 1 was returned to full power on June 3, 2017, and remained at full power for the remainder of the inspection period.

Unit 2 began the inspection period at full power. On April 12, 2017, Unit 2 power was reduced to 7 percent to remove the main turbine from service to repair an intercept valve hydraulic fluid leak. Unit 2 was returned to full power on April 14, 2017, and remained at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

.1 Readiness of Offsite and Alternate Alternating Current Power Systems

a. Inspection Scope

The inspectors verified that plant features and procedures for operation and continued availability of offsite and alternate alternating current (AC) power systems during adverse weather were appropriate. The inspectors reviewed the licensee's procedures affecting these areas and the communications protocols between the transmission system operator (TSO) and the plant to verify that the appropriate information was being exchanged when issues arose that could impact the offsite power system. Examples of aspects considered in the inspectors' review included:

- coordination between the TSO and the plant during off-normal or emergency events;
- explanations for the events;
- estimates of when the offsite power system would be returned to a normal state; and
- notifications from the TSO to the plant when the offsite power system was returned to normal.

The inspectors also verified that plant procedures addressed measures to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system prior to or during adverse weather conditions. Specifically, the inspectors verified that the procedures addressed the following:

- actions to be taken when notified by the TSO that the post-trip voltage of the offsite power system at the plant would not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply;
- compensatory actions identified to be performed if it would not be possible to predict the post-trip voltage at the plant for the current grid conditions;
- re-assessment of plant risk based on maintenance activities which could affect grid reliability, or the ability of the transmission system to provide offsite power; and
- communications between the plant and the TSO when changes at the plant could impact the transmission system, or when the capability of the transmission system to provide adequate offsite power was challenged.

Documents reviewed are listed in the Attachment to this report. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures.

This inspection constituted one readiness of offsite and alternate AC power systems sample as defined in Inspection Procedure (IP) 71111.01–05.

b. Findings

No findings were identified.

.2 External Flooding

a. Inspection Scope

The inspectors evaluated the design, material condition, and procedures for coping with the design basis probable maximum flood. The evaluation included a review to check for deviations from the descriptions provided in the Updated Safety Analysis Report (USAR) for features intended to mitigate the potential for flooding from external factors. As part of this evaluation, the inspectors checked for obstructions that could prevent draining, checked that the roofs did not contain obvious loose items that could clog drains in the event of heavy precipitation, and determined that barriers required to mitigate the flood were in place and operable. Additionally, the inspectors performed a walkdown of the protected area to identify any modification to the site which would inhibit site drainage during a probable maximum precipitation event or allow water ingress past a barrier. The inspectors also walked down underground bunkers/manholes subject to flooding that contained multiple train or multiple function risk-significant cables. The inspectors also reviewed the abnormal procedure for mitigating the design basis flood to ensure it could be implemented as written. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one external flooding sample as defined in IP 71111.01–05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- 11 Turbine Driven AFW System; and
- 22 Diesel Driven Cooling Water Pump System.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, the USAR, TS requirements, outstanding work orders (WOs), CAP documents, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These inspections constituted two quarterly partial system walkdown samples as defined in IP 71111.04–05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns, which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Fire Area 41; Screenhouse General Area; Elevation 695;
- Fire Zone 2; Unit 1 and 2 AFW Pump Rooms; Elevation 695;
- Fire Zone 94; Service Building Computer Room; Elevation 715; and
- Fire Area 17; Unit 2 Control Rod Drive Room; Elevation 735.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan.
The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event.
Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP.
Documents reviewed are listed in the Attachment to this report.

These inspections constituted four quarterly fire protection inspection samples as defined in IP 71111.05–05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On June 28, 2017, the inspectors observed a crew of licensed operators in the plant's control room simulator during licensed operator requalification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and EP actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11–05.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation During Periods of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

During the week of May 21 and May 28, 2017, the inspectors observed licensed operators in the control room during reduced power activities to address main transformer issues on Unit 1. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions.

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11–05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- Unit 1 AFW System Anticipated Transient Without Scram Mitigating System Actuation Circuitry (AMSAC) System; and
- Containment Fan Coil Unit Dampers.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and

independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These inspections constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12–05.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Unit 2 Turbine Intercept Valve Actuator Hydraulic Fluid Leak and Troubleshooting Activities;
- 12 Diesel Driven Cooling Water Pump Lubricating Oil Dilution Issue;
- Unit 1 Main Transformer Hot Spot and Subsequent Unit 1 Power Reduction for Repairs and Power Ascension Activities; and
- Unit 1 Containment Elevating Pressure Troubleshooting Activities.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were

consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Documents reviewed during this inspection are listed in the Attachment to this report.

These inspections constituted four maintenance risk assessments and emergent work control samples as defined in IP 71111.13–05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- EC 28334; Door 225 Transom Door Strike Plate and Latch Evaluation;
- CAP 1553638; RTV108 Sealant Environmental Qualification;
- CAP 1554399; AFW Room Design Maximum Temperature Limit;
- CAP 1558042; 121 & 122 Safeguards Chilled Water System;
- CAP 1556273; Anchor Darling Double Disc Gate Valve Wedge Pin Failure Part 21;
- CAPs 1553539 & 1554763; Battery Calculation Results and Discharge Test; and
- CAP 1555855; VC–15–56 Diaphragm Failure.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and USAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

These inspections constituted seven operability evaluation samples as defined in IP 71111.15–05.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of TS 5.4.1a, "Procedures," associated with the licensee's failure to properly implement Procedure FP–WM–MMP–01, "Minor

Maintenance Process," Revision 5, while planning and performing maintenance on a steam exclusion barrier transom latch assembly. Specifically, on February 3, 2017, maintenance workers in coordination with the Fix-It-Now (FIN) Senior Reactor Operator (SRO) removed the lower latch assembly from a transom above Door 225 that rendered the steam exclusion barrier non-functional. Consequently, for an approximately five minute window during maintenance on the latch assembly, the 11 safeguards battery system was rendered inoperable with respect to a postulated turbine building high energy line break (HELB) event.

Description: On January 24, 2017, while performing a fire protection inspection walk down in the 11 battery safeguards room, the inspectors noted that the latch assembly on the transom above Door 225 had approximately 1/16th inch engagement (pictured below). Door 225 separates the 11 battery room from the Unit 1 turbine building area.

Based on prior knowledge of the Prairie Island USAR and ongoing HELB analysis reconstitution project, the inspectors recalled that the 11, 12, 21, and 22 safeguard battery systems and AFW pump rooms had low margin to humidity and temperature rise limits during and following a postulated HELB event in the turbine building. Additionally, the inspectors confirmed with engineering that the current HELB analyses had not accounted for any steam leakage through the transom (pictured above) into the battery and AFW rooms. The inspectors immediately presented their observation to the Shift Manager (SM) and CAP 1548470 was generated. In response, the licensee initiated work request (WR) 130746 to address the inspectors' observation. Subsequent review of the WR was performed by the WR screening team, forwarded to the FIN SRO and processed as a minor WO.

Prior to beginning work, the maintenance crew communicated to the FIN SRO that they planned to increase the engagement of the latch assembly (pictured above). In response, the SRO communicated to the crew that the transom was a steam exclusion barrier and should remain closed during maintenance. The crew specified that the transom would be held closed by hand during the maintenance repair. However, the crew did not communicate that the lower latch assembly would be entirely removed during the maintenance window. Consequently, on February 3, 2017, maintenance workers removed and replaced the latch as a minor work activity without a steam exclusion barrier permit in place and unbeknownst to the SM and engineering. A few days later on February 6, during a subsequent plant tour, the inspectors identified the latch had been adjusted and they communicated their observation to engineering who informed operations and then initiated CAP 1549724. Initial review of this issue by the

SM on February 6 determined that the transom steam exclusion barrier remained functional by crediting a maintenance worker's hand on the transom as an adequate measure to mitigate a HELB event. However, after a subsequent challenge by the inspectors on February 7, in regard to the transom configuration, a past operability review was initiated. Specifically, the inspectors noted that the transom opened into the 11 battery room and therefore holding the door closed by hand during a postulated HELB event would have been unlikely.

The licensee completed the past operability review on March 20, and concluded that the 11, 12, 21, and 22 safeguards batteries and AFW systems and Unit 1 safeguards bus rooms were inoperable during the approximate five minute maintenance window on February 3, and represented an unanalyzed condition that significantly degraded plant safety. In the absence of existing HELB analyses for the impact on the batteries and AFW systems during a postulated HELB event, the licensee performed several GOTHIC model analyses that were completed and approved on April 5; concluding that only the 11 battery system would have been considered inoperable during the maintenance activity. In their review, the inspectors requested support from a Region III inspector who specialized in GOTHIC modelling to assist in evaluating and confirming adequacy of the licensee's final determination of past operability for the affected systems. In conclusion, the inspectors determined the analyses performed adequately limited postulated HELB impact to the 11 battery and therefore safety functions were not impacted during the maintenance activity.

In parallel with the activities above, the inspectors reviewed the licensee's associated apparent cause evaluation completed on March 8, 2017, under CAP 1549724. In their review, the inspectors noted that FP–WM–MMP–01, Section 5, "Requirements," specified the criteria for what constituted minor maintenance and the threshold for entering WR 130746 into the work order planning process. Specifically, Step 5.3.a of FP–WM–MMP–01 required, in part, that minor maintenance must not affect the safety-related function of any system or component. Consequently, the inspectors concluded that the WR screening team, maintenance workers and the FIN SRO failed as a team to ensure that WR 130746 detailing maintenance on a steam exclusion barrier impacting safety-related equipment was entered into the work planning process as required by FP–WM–MMP–01. This failure was most noteworthy because the work planning process required that work orders would be reviewed by a HELB Coordinator under Attachment 3 of FP–WM–PLA–01, "Work Order Planning Process," Revision 30. Therefore, if followed correctly, the work order planning process would have directed use of a steam exclusion barrier permit to limit impact on the 11 safeguards battery during the maintenance activity.

Analysis: The inspectors determined that the licensee's failure to properly implement procedure FP–WM–MMP–01 as required by TS 5.4.1.a. was a performance deficiency. The performance deficiency was determined to be more than minor and a finding in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," because it was associated with the Mitigating Systems Cornerstone attribute of Human Performance and affected the associated 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 properly plan and perform maintenance on the Door 225 transom latch assembly, a designated steam exclusion barrier, resulting in rendering the 11 safeguards battery system inoperable during an approximate five minute maintenance activity.

The inspectors utilized IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," and determined that this issue was of very low safety significance (Green) because each question provided in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," was answered "No." The inspectors concluded that this finding was cross-cutting in the Human Performance, Teamwork area because individuals and work groups failed to properly communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained. Specifically, the WR screening team, FIN SRO and maintenance workers performing maintenance on the Door 225 transom latch assembly failed to recognize and communicate the implications of removing the latch assembly. [H.4]

Enforcement: Technical Specification 5.4.1.a, "Procedures," required, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 9.a. states, in part, that maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures appropriate to the circumstance.

Contrary to the above, on February 3, 2017, the licensee failed to properly implement FP–WM–MMP–01, "Minor Maintenance Process," Revision 5, that required, in part, that maintenance that affects safety-related function of any system or component be performed within the work order planning process.

Corrective actions for this issue included completing a past operability review, an apparent cause evaluation, and communicating lessons learned to the operations and maintenance departments focusing on the potential consequences of communications without the appropriate level of technical information and working within the bounds of the minor maintenance program. Because this violation was of very low safety significance and was entered into the licensee's Corrective Action program as CAPs 1548470 and 1549724, this violation is being treated as an NCV, consistent with Section 2.3.2 of the U.S. Nuclear Regulatory Commission (NRC) Enforcement Policy. **(NCV 05000282/2017002–01, Failure to Properly Implement the Minor Maintenance Process During Door 225 Transom Maintenance)**.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification:

- EC 26390; Unit 1 Condensate and Feed Water Time Display Relay Modification

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the USAR, and the TSs, as applicable, to verify that the modification did not affect the operability or availability of the affected systems. The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification

testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one permanent plant modification sample as defined in IP 71111.18–05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing (PMT)

a. Inspection Scope

The inspectors reviewed the following PMT activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Door 225 Transom Repairs and PMT;
- Unit 2 Turbine Intercept Valve Actuator Replacement PMT;
- 12 Diesel Driven Cooling Water Pump Following Endurance Run and Oil Change;
- Unit 1 Main Transformer PMT Following Hot Spot Repairs; and
- Unit 2 Pressurizer Spray Valve Controller Capacitor Replacement.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing; and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with PMTs to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety.

These inspections constituted five post-maintenance testing samples as defined in IP 71111.19–05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- SP 1155A; Train A Component Cooling System Quarterly Test (Routine);
- SP 1001B; Unit 1 Control Room Log Mode 1 and 2 Channel Check Surveillance Test (Routine);
  SP 1089B; Train B Residual Heat Removal Pump and Suction Valve from Reactor Water Storage Tank (RWST) Quarterly Test (Routine);
- SP 1001AA; Daily Reactor Coolant System Leakage Test (RCS); and
- SP 1358; VC–2–2, RWST to Charging Pumps Check Valve Quarterly In-ServiceTest (IST).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for in-service testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers (ASME) code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;

- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

These inspections constituted three routine surveillance testing samples, one reactor coolant system (RCS) leak detection inspection sample, and one IST sample as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

1EP2 Alert and Notification System Evaluation (71114.02)

.1 Alert and Notification System Evaluation

a. Inspection Scope

The inspectors reviewed documents and held discussions with Emergency Preparedness (EP) staff regarding the operation, maintenance, and periodic testing of the primary and backup Alert and Notification System (ANS) in the plume pathway Emergency Planning Zone. The inspectors reviewed monthly trend reports and siren test failure records from April 2015 to March 2017. Information gathered during document reviews and interviews were used to determine whether the ANS equipment was maintained and tested in accordance with EP commitments and procedures. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one alert and notification system evaluation sample as defined in IP 71114.02–06.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

.1 Emergency Response Organization Staffing and Augmentation System

a. Inspection Scope

The inspectors reviewed and discussed with plant EP management and staff the EP commitments and procedures that addressed the primary and alternate methods of initiating an Emergency Response Organization (ERO) activation to augment the on-shift

staff as well as the provisions for maintaining the plant's ERO team and qualification lists. The inspectors reviewed reports and a sample of CAP records of unannounced off-hour augmentation drills and pager tests, which were conducted from April 2015 to March 2017, to determine the adequacy of the drill critiques and associated corrective actions. The inspectors also reviewed a sample of the training records of approximately 10 ERO personnel, who were assigned to key and support positions, to determine the status of their training as it related to their assigned ERO positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one emergency response organization augmentation testing sample as defined in IP 71114.03–06.

b. Findings

No findings were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

.1 Maintenance of Emergency Preparedness

a. Inspection Scope

The inspectors reviewed the nuclear oversight staff's 2016 and 2017 audit of the Prairie Island Nuclear Generating Plant's EP program to determine that the independent assessments met the requirements of 10 CFR 50.54(t). The inspectors reviewed samples of CAP records associated with the 2016 biennial exercise, as well as various EP drills conducted since April 2015, in order to determine whether the licensee fulfilled drill commitments and to evaluate the licensee's efforts to identify and resolve identified issues. The inspectors reviewed a sample of EP items and corrective actions related to the station's EP program, and activities to determine whether corrective actions were completed in accordance with the site's CAP. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one maintenance of emergency preparedness sample as defined in IP 71114.05–06.

b. Findings

Introduction: A self-revealed finding and an associated NCV of 10 CFR 50.54 (q)(2), and 10 CFR 50.47 (b)(5) was identified on August 13, 2016. After a Notice of Unusual Event (NOUE) was declared due to RCS leakage greater than 25 gpm, the Shift Emergency Communicator (SEC) did not make the initial notification to the States, Locals, and Tribal Community within 15 minutes of the classification.

Description: On August 13, 2016, a NOUE was declared due to RCS leakage greater than 25 gpm caused by a letdown line containment isolation valve that failed closed and a relief valve that lifted and discharged to the pressurizer relief tank. The SEC conducted the initial notification after the classification was made, as required, to the applicable six off-site response organizations (OROs). The SEC did not appropriately follow the procedure and stopped the conference call incorrectly, then dialed back into the conference bridge. However, when the SEC was re-connected, four out of the six OROs were missing from the conference bridge. Therefore, Pierce and Goodhue

counties, the local tribal community, and the Minnesota Duty Officer (MDO) had to be contacted individually which led to the untimely notification of the OROs. The licensee's Emergency Plan, Section 5.3.1 H.1, states in part, that, "Immediate (within 15 minutes), the initial notification message to State, local and tribal authorities, from the plant, **SHALL** contain the following information: (a) Class of emergency; (b) Whether radioactivity is being released and in what form (liquid or gas); (c) Potentially affected populace and area, if any; (d) Necessity of protective measures; and (e) Brief description of the event." However, the licensee completed the notification 26 minutes after the classification time, which is untimely. This is a failure to implement the licensee's Emergency Plan during an actual event.

Since 2015, the licensee has written several condition reports from drill and exercise critiques regarding untimely notification of the OROs. In each of these cases, the initial notification was completed to one of the six OROs and, therefore, met the Drill and Exercise Performance (DEP) Indicator as a success. However, the requirement to complete notification to all six OROs within 15 minutes was not met and not addressed in some of the condition reports that were written. Additionally, the condition reports that were written did not receive a high level evaluation when a trend in untimely notification was identified by the licensee. There have been a few corrective actions initiated to address hardware issues like adding additional teleconference lines and changing the phones.

The inspectors determined this issue to be self-revealed because although the licensee had issues with notification timeliness in previous drills and exercises, the untimely notification that occurred on August 13, 2016, was during an actual NOUE.

The licensee entered this issue into their Corrective Action Program as CAP 1555045 and was conducting an apparent cause evaluation at the end of the inspection period that will evaluate the untimely notification that was made during the August 13, 2016, NOUE as well as the overall timeliness issues with notifications since 2015.

Analysis: The inspectors determined that the failure to notify the OROs within 15 minutes of the classification of an emergency, as required per the licensee's Emergency Plan, was a performance deficiency.

The inspectors reviewed IMC 0612, Appendix B, dated September 22, 2015, and determined that the performance deficiency was more than minor because it adversely affected the ERO performance attribute of the EP cornerstone and adversely affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Since the finding involved a failure to implement the licensee's Emergency Plan during an actual event, the inspectors reviewed IMC 0609, Appendix B, Attachment 1, dated September 22, 2015, and determined that this was a finding of very-low safety significance (Green) because it involved the failure to notify the OROs as required in the licensee's Emergency Plan after the classification of a NOUE. The finding was associated with the cross-cutting aspect of procedure adherence in the area of human performance because the SEC did not appropriately follow procedures to conduct the notification to the OROs. [H.8]

Enforcement: Title 10 CFR 50.54(q)(2) requires, in part, that a holder of a license under this part shall follow and maintain the effectiveness of an emergency plan that meets the requirements of Appendix E, Part 50, and for nuclear power reactor licensees, the

planning standards of 10 CFR 50.47(b). Title 10 CFR 50.47(b)(5) requires, in part, that "Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organization." 10 CFR 50, Appendix E, states in part, that, "A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency." Section 5.3.1.H.1 of the Prairie Island Emergency Plan, Revision 52, states in part, that, "Immediate (within 15 minutes), the initial notification message to State, local and tribal authorities, from the plant, **SHALL** contain the following information: (a) Class of emergency; (b) Whether radioactivity is being released and in what form (liquid or gas); (c) Potentially affected populace and area, if any; (d) Necessity of protective measures; and (e) Brief description of the event."

Contrary to the above, on August 13, 2016, the licensee failed to implement the Emergency Plan by failing to notify the State, local, and tribal authorities within 15 minutes. Specifically, the licensee did not follow the notification procedure appropriately which caused the initial notification to the State, local, and tribal community to be delayed and completed in 26 minutes. Because the finding was of very-low safety significance (Green) and it was entered into the licensee's Corrective Action Program as CAP 1555045, this violation is being treated as an NCV consistent with Section 2.3.2 of the NRC's Enforcement Policy. **(NCV 05000282/2017002–02, Failure to Implement the Emergency Plan)**

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on May 23, 2017, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the technical support center to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also reviewed the licensee drill critique results to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate verify whether the licensee staff was properly identifying weaknesses and entering them into the CAP. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This inspection constituted one emergency preparedness drill observation inspection sample as defined in IP 71114.06–05.

b. Findings

No findings were identified.

.2 Training Observation

a. Inspection Scope

The inspector observed a simulator training evolution for licensed operators on May 23, 2017, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that the licensee evaluators noted the same issues and entered them into the CAP. As part of the inspection, the inspectors reviewed the scenario package and other documents listed in the Attachment to this report.

This inspection constituted one licensee's training evolution with emergency preparedness drill aspects as defined in IP 71114.06–05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index (MPSI)—High Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MPSI—High Pressure Injection Systems performance indicator, Units 1 and 2, for the period from the second quarter 2016 through the first quarter of 2017. To determine the accuracy of the performance indicator (PI) reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99–02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, Mitigating Systems Performance Index (MSPI) derivation reports, event reports and NRC Integrated Inspection Reports for the period of April 1, 2016, through March 31, 2017, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI high pressure injection system samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI–Heat Removal System performance indicator, Units 1 and 2, for the period from the 2nd quarter of 2016 through the 1st quarter of 2017. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI Document 99–02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, MSPI derivation reports, and NRC Integrated Inspection Reports for the period of April 1, 2016, through March 31, 2017, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI heat removal system samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.3 Drill and Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the DEP Indicator for the period from the second quarter of 2016 through the fourth quarter of 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99–02, "Regulatory Assessment PI Guideline," Revision 7, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the DEP indicator, in accordance with relevant procedures and NEI guidance. Specifically, the inspectors reviewed licensee records and processes, including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions; performance during the 2016 biennial exercise; and performance during other drills. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one drill and exercise performance sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.4 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO Drill Participation PI for the period from the second quarter through fourth quarter. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI Document 99–02, "Regulatory Assessment PI Guideline," Revision 7, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator, in accordance with relevant procedures and NEI guidance. Specifically, the inspectors reviewed licensee records and processes, including procedural guidance on assessing opportunities for the PI; participation during the 2016 biennial exercise and other drills; and revisions of the roster of personnel assigned to key ERO positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one emergency response organization drill participation sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.5 Alert and Notification System Reliability

a. Inspection Scope

The inspectors sampled licensee submittals for the ANS PI for the period from the second quarter of 2016 through fourth quarter of 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI Document 99–02, "Regulatory Assessment PI Guideline," Revision 7, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator, in accordance with relevant procedures and NEI guidance. Specifically, the inspectors reviewed licensee records and processes, including procedural guidance on assessing opportunities for the PI and results of periodic ANS operability tests. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one alert and notification system reliability sample as defined in IP 71151–05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Some minor issues were entered into the licensee's CAP as a result of the inspectors' observations; however, they are not discussed in this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter.

b. Findings

No findings were identified.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6–month period of January 1 through June 30, 2017, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This inspection constituted one semiannual trend review inspection sample as defined in IP 71152.

b. Findings

No findings were identified.

.3 Annual Follow-Up of Selected Issue: Corrective Action Program 1553950; Missed Eight Hour Non-Emergency Report for Door 225 Transom

a. Inspection Scope

The inspectors selected the following condition reports for in-depth review:

- CAP 1553950; Missed Eight Hour Non-Emergency Report for Door 225 Transom.

As appropriate, the inspectors verified the following attributes during their review of the licensee's corrective actions for the above condition reports and other related condition reports:

- complete and accurate identification of the problem in a timely manner commensurate with its safety significance and ease of discovery;
- consideration of the extent of condition, generic implications, common cause, and previous occurrences;
- evaluation and disposition of operability/functionality/reportability issues;
- classification and prioritization of the resolution of the problem commensurate with safety significance;
- identification of the root and contributing causes of the problem; and
- identification of corrective actions, which were appropriately focused to correct the problem;
- completion of corrective actions in a timely manner commensurate with the safety significance of the issue;
- effectiveness of corrective actions taken to preclude repetition; and
- evaluate applicability for operating experience and communicate applicable lessons learned to appropriate organizations.

The inspectors discussed the corrective actions and associated evaluations with licensee personnel.

This inspection constituted one in-depth problem identification and resolution inspection sample as defined in IP 71152.

b. Findings

Introduction: The inspectors identified a SL IV NCV of 10 CFR 50.72(b)(3)(ii)(B) due to the licensee's failure to report an unanalyzed condition within eight hours of discovery. Specifically, removing the lower latch assembly of a transom above Door 225, a steam exclusion barrier, during maintenance resulted in the inoperability of the Units 1 and 2 safeguards batteries and auxiliary feed water (AFW) systems, and Unit 1 safeguards bus as determined by CAP 1549724.

Description: On February 3, 2017, licensee personnel performed maintenance on the transom above the 11 safeguards battery room Door 225. This activity resulted in the transom being unlatched for approximately five minutes. On February 6, 2017, the inspectors questioned operations and engineering regarding the impact that the unlatched transom would have had on the safeguards equipment with respect to a postulated high energy line break (HELB) event. In response, the licensee initiated a

past operability review. On March 20, 2017, the licensee completed the past operability review and concluded that, in the event of a postulated HELB event, the transom being unlatched during the five minute maintenance period resulted in the inoperability of multiple systems in the Unit 1 and Unit 2 safeguards battery and AFW pump rooms, and Unit 1 safeguards bus rooms. On March 23, 2017, while discussing the past operability review conclusion with regulatory affairs personnel, the inspectors inquired if any reporting requirements were applicable and CAP 1553950 was generated. Consequently, after prompting by the inspectors, the licensee determined the momentary loss of multiple systems discussed above was a loss of safety function required to mitigate a postulated HELB event and reported the unanalyzed condition to the NRC on March 24, 2017. In response, the licensee performed further analysis and determined that only equipment in 11 battery room and supported A train components would have been inoperable for the five minute duration the transom door 225 was unlatched. As a result of demonstrating safety function was maintained, the licensee retracted the associated March 24, 2017, eight hour non-emergency report on April 10, 2017.

Analysis: The inspectors determined that the failure to submit a report required by 10 CFR 50.72 for the unanalyzed condition described above was a performance deficiency. The inspectors determined that this issue had the potential to impact the regulatory process based, in part, on the information that 10 CFR 50.72 reporting serves. Since the issue impacted the regulatory process, it was dispositioned through the Traditional Enforcement process. The inspectors determined that this issue was a SL IV violation based on Example 6.9.d.9 in the NRC Enforcement Policy. Example 6.9.d.9 specifically states, "A licensee fails to make a report required by 10 CFR 50.72 or 10 CFR 50.73."

Because the final analysis performed by the licensee demonstrated that safety function was maintained, the NRC determined this violation was associated with a minor performance deficiency. Additionally, under the Traditional Enforcement process, there was no cross-cutting aspect associated with this violation.

Enforcement: Title 10 CFR 50.72(b)(3), "Eight-hour reports," requires, in part, that "If not reported under paragraphs (a), (b)(1) or (b)(2) of this section, the licensee shall notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any of the following:…(ii) Any event or condition that results in:…(B) The nuclear power plant being in an unanalyzed condition that significantly degrades plant safety."

Contrary to the above, on March 20, 2017, the licensee failed to report within eight hours of the occurrence (discovery on March 20, 2017,) an unanalyzed condition associated with the inoperability of the Units 1 and 2 safeguards batteries and AFW systems, and Unit 1 safeguards bus during Door 225 transom latch maintenance. Corrective actions for this issue included reporting the condition on March 24, 2017, revising procedures, performing further analysis to demonstrate safety function was maintained following a postulated HELB event, and retracting the associated eight hour non-emergency report on April 10, 2017. Because this issue was entered into the licensee's Corrective Action Program as CAP 1553950, it is being treated as a SL IV NCV consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000282/2017002–03; 05000306/2017002–03, Failure to Make an 8–Hour Report Required by 10 CFR 50.72(b)(3)(ii)(B)).**

4OA6 Management Meetings

.1 Exit Meeting Summary

On July 13, 2017, the inspectors presented the overall inspection results to Mr. S. Northard, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- On April 7, 2017, the results of the Emergency Preparedness (EP) Program inspection were discussed with Mr. S. Northard, Site Vice President.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

4OA7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as a NCV.

- Title 10 CFR 50.54(q)(2) requires that a holder of a nuclear power reactor operating license follow and maintain the effectiveness of an emergency plan that meets the requirements in 10 CFR Part 50, Appendix E and the planning standards of 10 CFR 50.47(b). Title 10 CFR Part 50.47(b)(8) states, “Adequate emergency facilities and equipment to support the emergency response are provided and maintained.” Section 8.2.2 of the Prairie Island Emergency Plan, Revision 52, states “All supplies are inventoried quarterly and dated equipment and material are periodically replaced according to surveillance and testing program.”

Contrary to the above, from the fourth quarter of 2015 to fourth quarter of 2016, the licensee failed to maintain the effectiveness of the Emergency Plan by failing to complete the quarterly inventory of supplies and equipment in the alternative emergency response facility at their Red Wing Service Center. Specifically, for approximately five quarters, the licensee had not been conducting required quarterly inventory and equipment checks at the Alternative Emergency Response Facility due to several site procedures and supporting forms that verify continued facility readiness that were not updated or created following the 2014 Hostile Action Based Exercise.

The inspectors determined that the finding was of very-low significance (Green) in accordance with NRC Inspection Manual Chapter (IMC) 0609, Appendix B, “Emergency Preparedness Significance Determination Process,” Attachment 2, because this is a failure to comply with the Emergency Plan that does not result in a loss of a planning standard function.

The licensee determined that the alternative emergency response facility remained functional during the time period when the inventories were missed. Because this finding is of very low safety significance, and has been entered into the licensee's Corrective Action Program under CAP 1513061, this violation is being treated as a Green NCV consistent with Section 2.3.2 of the NRC's Enforcement Policy.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Northard, Site Vice President
T. Conboy, Director of Site Operations
J. Callahan, Fleet EP Manager
B. Carberry, EP Manager
R. Erickson, Security Project Manager
H. Butterworth, Director of Business Support
R. White, Director – Security/EP
J. Corwin, Security Manager
R. Sitek, EP Coordinator
J. Payton, EP Coordinator
A. Kennedy, EP Coordinator
J. Bjorseth, Engineering Director
W. Paulhardt, Plant Manager
S. Sharp, Director of Performance Improvement
J. Boesch, Maintenance Manager
J. Kivi, Regulatory Affairs Manager
T. Borgen, Operations Manager
B. Boyer, Radiation Protection Manager
B. Truckenmiller, Chemistry & Environmental Manager
D. Lapcinski, Assistant Operations Manager
S. Martin, Human and Organizational Performance Manager
S. Lappegaard, Production Planning Manager
P. Johnson, Regulatory Affairs Analyst

U.S. Nuclear Regulatory Commission

B. Dickson, Chief, Reactor Projects Branch 2
R. Kuntz, Project Manager, Office of Nuclear Reactor Regulation

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000282/2017002–01	NCV	Failure to Properly Implement the Minor Maintenance Process During Door 225 Transom Maintenance (Section 1R15)
05000282/2017002–02	NCV	Failure to Implement the Emergency Plan (Section 1EP5.1)
05000282/2017002–03 05000306/2017002–03	NCV	Failure to Make an 8–Hour Report Required by 10 CFR 50.72(b)(3)(ii)(B) (Section 4OA2.3)

Closed

05000282/2017002–01	NCV	Failure to Properly Implement the Minor Maintenance Process During Door 225 Transom Maintenance (Section 1R15)
05000282/2017002–02	NCV	Failure to Implement the Emergency Plan (Section 1EP5.1)
05000282/2017002–03 05000306/2017002–03	NCV	Failure to Make an 8–Hour Report Required by 10 CFR 50.72(b)(3)(ii)(B) (Section 4OA2.3)

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R01 Adverse Weather Protection

- AB–4; Flood; Revision 50
- CAP 1559728; Entered AB–4, FLOOD; May 24, 2017
- TP 1636; Summer Plant Operation; Revision 32
- CAP 1560421; U2 Rod Drive Room at 83°F; June 5, 2017
- FP–MA–SWD-01; Control of Switchyard Work Activities; Revision 5
- CD 4.3; NSPM Federal Energy Regulatory Commission (FERC/North American Electric Reliability Corporation (NERC) Compliance; Revision 3
- ESO 6.400P; System Operating Code Response; Revision 5.1
- ESO 6.105; Reactive Power and Voltage Control Policy NERC VAR-002 Compliance Requirements; Revision 3.1
- ESO 6.410; Power Plant Operator Communication and Response Policy; Revision 10.1

1R04 Equipment Alignment

- CAP 1556896; Undocumented 1” to 2” Between Scaffold & 22 DD CLG WTR PMP; April 25, 2017
- CAP 1087450; Incorrect Restoration Position on Clearance Order; February 6, 2008
- CAP 1556916; Need Clarification on D80 for Ladder Storage; April; 25, 2017
- CAP 1556715; NRC Questioned if 22 Diesel Driven Cooling Water Pump Oil Has Been Sampled; April 24, 2017
- CAP 1556989; 22 DD CLG WTR PMP Start Air Compressor Air Leaks; April 26, 2017
- C35; Cooling Water; Revision 85
- B28B; Auxiliary Feedwater System; Revision 12
- CAP 1555762; All 4 AFW PUMP Seal Leaks Drains Onto Pipe Above Trough; April 14, 2017

1R05 Fire Protection

- F5 Appendix A; Fire Strategies; Revision 31
- F5; Fire Fighting; Revision 35
- F5 Appendix F; Fire Hazard Analysis; Revision 33
- F5 Appendix K; Fire Protection Systems Functional Requirements; Revision 23
- Appendix F; Table 6–1—Fire Hazards Analysis Matrix; Revision 33
- CAP 5010000000205; NRC Question on Scaffold in Bus 111 Room; June 29, 2017

1R11 Licensed Operator Requalification Program

- SEG #P9116ST1–109; Cycle 16K SIM Session #1—Licensed Operator Requalification; June 27, 2017
- CAP 1560212; Unresolved CAQ Identified with #2 Bonding Jumpers for 1GT; June 1, 2017
- CAP 1559376; Hot Spot on 1GT Transformer; May 21, 2017
- CAP 1559696; Unit 1 GSU Bonding Jumpers Incorrect Size; May 24, 2017
- PM 4910; Thermographic Inspection of Prairie Island Components; Revision 9

- CAP 1557315; Thermography Reading Out of Tolerance with Procedure; April 28, 2017
- CAP 1559468; Trend in Induced Heating Due on Electrical Equipment; May 22, 2017
- CAP 1559457; Unit 1 Bus Duct Ground Cables Degraded Inside Turbine Building; May 22, 2017

1R12 Maintenance Effectiveness

- NF–40794; Interlock Logic Diagram AMSAC/DSS System Unit 2; Revision 76
- NF–40795; Interlock Logic Diagram AMCAS/DSS System Unit 1; Revision 76
- NF–40310–1; Interlock Logic Diagram Feedwater System Unit 1; Revision 79
- NF–40772–1; Interlock Logic Diagram Feedwater System Unit 2; Revision 78
- FW–02 Feedwater System; Prairie Island Maintenance Rule Bases Document; June 2, 2017
- FP–E–MR–02; Maintenance Rule Scoping; June 9, 2017
- B28A; Condensate and Feedwater System; Revision 11
- Maintenance Rule (a)(1) Status; May 18, 2017
- CAP 1024213; Unit 1 Reactor Tripped After Losing 50 Percent FW Flow From 100 Percent; February 4, 2010
- CAP 1481674; 12 CD PMP Auto-Started at 370 Instead of 303 PSIG, PS–16087; October 27, 2015
- CAP 1510312; SP 1345, Revised 13, ED 26390; December 23, 2016
- CAP 1481297; 11 Condensate Pump Lockout; March 15, 2017
- WO 478919 01; SP 1345–4kV Bus 11 Cub 3 11 MFWP Test Tripping; November 4, 2016

1R13 Maintenance Risk Assessment and Emergent Work Control

- CAP 1555582; High Vibes #4 Bearing While Rolling; April 12, 2017
- CAP 1555468; Temp Turbine Oil Lift Pump Unavailable When Required; April 12, 2017
- CAP 1555461; CV–31145 Dual Indication after Turbine Trip; April 12, 2017.
- CAP 1555605; CV–2, CV–31365, on Unit 2 Turbine Did Not Open on Demand; April 13, 2017
- CAP 1555338; CV–31179, EH Oil Leak; April 11, 2017
- Reactivity Plan; Prairie Island Unit 2 Cycle 29 Power Change EH Oil Leak—24 Hours at 8 Percent, 100 Percent to 8 Percent to 100 Percent; April 12–14, 2017
- 2C23 AOP2; Malfunction of Turbine EH Control System; Revision 16
- CAP 1556332; Elevated Fuel Dilution in 12 DD CLG WTR PMP Oil After Change; April 21, 2017
- CAP 1561351; Air Leak Inside Regen HX Room; June 19, 2017
- CAP 1561352; Air Leak Near CRDM Damper Actuator; June 19, 2017
- CAP 1560969; Air Leak on Threads on Inlet to SV–33434; June 13, 2017
- CAP 1561263; Slow Increase in Unit 1 Containment Pressure; June 16, 2017
- CAP 1559924; 47024–1104; 12 DC Panel Ground Detection in Alarm; May 29, 2017
- CAP 1560062; Heating on the Inspection Cover for A Phase Bus Duct; June 1, 2017
- XH–1–39; Flow Diagram Chemical Volume Control Unit 1; Revision 80
- CAP 1555855; While Performing SP 1358, Valve VC–15–56 Diaphragm Failed; April 16, 2017
- CAP 1555588; U–2 Temporary Turbine Oil Lift Pump Not Connected Properly; April 12, 2017

1R15 Operability Determinations and Functionality Assessments

- CAP 1554399; AF Rm Design Max Temp Limit is 122F; Calc States 132.8F; March 30, 2017
- ENG–ME–021; Auxiliary Feedwater Pump Room Heat-Up Analysis; Revision 2
- CAP 1553638; RTV108 Sealant is No Longer Environmentally Qualified; March 21, 2017
- Calculation No. 1067-0085-CALC-001; Calculation for Transom Door Strike; Revision 0

- EC 28433; Door 225 Transom Latch Summary; Revision 0
- EC 28334; Door 225 Transom, Strike Plate/Latch Evaluation; Revision 1
- EC 28424; HELB Evaluation of Door 225 Transom with Strike Uninstalled; Revision 0
- EC 28416; Door 225 Incorrect Latch Strike Evaluation for Impact on Operability; Revision 0
- CAP 1548470; NRC Question on Door 225 Transom Impacting 11, 12, 21, 22 Safeguards Battery Systems; January 24, 2017
- CAP 1549724; NRC Question on Door 225 Transom Latch Repair; February 6, 2017
- CAP 1549702; Follow up NRC Question on Door 225 Transom (also 224); February 6, 2017
- CAP 1553868; Door 225 Transom Post Evolution Critique; March 23, 2017
- CAP 1557954; MOV Weak Link Software for Butterfly Valves Possible Error; May 4, 2017
- CAP 1557995; Missed Opportunity Engineering Risk Management; May 5, 2017
- H27; Control of Steam Exclusion Boundaries; Revision 17
- CAP 1555679; Temp Indicator (TI–17407 121 CR Chiller Chilled Wtr Temp Outlet) is Reading Below Normal Band; April 13, 2017
- TP 1687; 121 Control Room Chiller Inspection; Revision 15
- Calculation No. 1067–0085–CALC–001; Calculation for Transom Door Strike; Revision 0
- EC 28433; Door 225 Transom Latch Summary; Revision 0
- EC 28334; Door 225 Transom, Strike Plate/Latch Evaluation; Revision 1
- EC 28424; HELB Evaluation of Door 225 Transom with Strike Evaluation for Impact on Operability; Revision 0
- EC 28416; Door 225 Incorrect Latch Strike Evaluation for Impact on Operability; Revision 0
- FP–WM–WOI–01; Work Identification, Screening, Validation, and Cancellation;
- Revision 21;
- CAP 1558042; Prompt Operability Determination—Chilled Water System; Revision 0
- CAP 1555679; 121 Control Room Chiller Temp Low Operability Evaluation; April 14, 2017
- EC 28600; Evaluation of Wedge Pin for Anchor Darling Double Disc Gate Valves to Support POD 01556273-02
- CAP 1556273; Corp Evaluation of A/D DDGV Part 21 Issue Resolution; April 20, 2017
- CAP 1556332; Elevated Fuel Dilution in 12 DD CLG WTR PMP Oil After Change; April 20, 2017
- CAP 1558682; Subject: DC Calculation Minor to Major Revision Not Incorporated; May 12, 2017
- CAP 1558692; Subject: Fuse Resistance Missing From ENG-EE-200; May 12, 2017
- CAP 1557921; Subject: Annunciator Project Not Considered in DC Calculations; May 4, 2017
- CAP 1548783; Preliminary Battery Calculation Results; January 27, 2017
- CAP 1553539; Results Obtained for New DC Battery Calculations; March 30, 2017
- CAP 1554763; Question Raised on 1R30 Performance of SP 1098; April 4, 2017
- DAR 1556152; Inconsequential Error Found in EC Evaluation for EC 51554; April 19, 2017
- CAP 1555765; New DC Calculations Impact on OPR 01270104-01 Revision 9; April 14, 2017
- CAP 1554399; AF Room Design Max Temp Limit is 122F; Calc States 132.8F; March 30, 2017

1R18 Plant Modifications

- EC 26390; U1 Condensate/Feedwater System SPV Time Delay Relay Mod; December 8, 2016
- FP–E–SE–02; Component Classification; Revision 14
- FP–E–MOD–02; Modification Control; Revision 8
- CAP 1542120; Reclassify Unit 1 CD Components; December 14, 2016
- ENG–ME–837; Transient Hydraulic Analysis in Support of Unit 1 Feedwater Time Delay Relay Modification; Revision 000

- CAP 1559998; 11 Heater Drain TK Pump Locked Out; May 31, 2017

1R19 Post-Maintenance Testing

- 2C1.2–M1; Unit 2 Startup to Mode 1; Revision 4
- WO 562027–04; PMT CV–31179 Following Repairs; April 13, 2017
- CAP 1559376; Hot Spot on 1GT Transformer; May 21, 2017
- CAP 1555295; Pressurizer Spray Valve B (CV–31229) Diverge from A; April 10, 2017
- CAP 1546495; Unit 2 Pressurizer Spray Control Signals Diverged; January 13, 2017
- CAP 1558956; Unit 2 B Pressurizer Spray Recurring Erratic Behavior; May 19, 2017
- WO 557426; Unit 2 Pressurizer Spray Control Signals Diverged; June 8, 2017
- CAP 1556151; CD—34201 Has Gaps Between Several Blades When Closed; April 19, 2017
- CAP 1557856; Multiple Alarms Received for U2 NSSS System Trouble; May 4, 2017
- CAP 1561303; BKR 8H17 "A" SF–6 Pressure Decreasing; June 17, 2017
- CAP 1559320; 21 SI PMP 245–071 Seal Leakage Increased; May 19, 2017
- WR 1559376; 1GT/XFMR Troubleshooting Plan; May 21, 2017
- WR 130746; Fix Latch Engagement For Transom Door 225; February 3, 2017
- WO 560830; Mech. Install Correct Latch Hardware on Door 225; March 31, 2017
- WR 132382; CV–31146 Dual Indication After Turbine Trip; April 12, 2017
- B8; Reactor Protection System; Revision 9

1R22 Surveillance Testing

- SP 1001AA; Daily Reactor Coolant System Leakage Test; Revision 62
- CAP 1546185; Unit 1 RCS Head Vent System Leakage; January 1, 2017
- CAP 1558811; H60 Limit Exceeded During SP 1001AA; May 14, 2017
- CAP 1558963; SP 1001AA RCS Unidentified Leakage High; May 16, 2017
- CAP 1559058; SP 1001AA Exceeded 9 Day Mean for the 4th Day In a Row; May 17, 2017
- CAP 1559171; SP 1001AA Exceeded 9 Day Mean for the 5th Day In a Row; May 18, 2017
- CAP 1559375; Unexplained 1R10 and 1R11 ROC Increase; May 21, 2017
- CAP 1555539; 11 Charging Pump Recorded Packing Leakage is Questionable; April 19, 2017
- WO 555585 01; OPS: SP 1155A CC System Quarterly Test Train A; May 9, 2017
- SP 1155A; CC System Quarterly Test Train A; May 9, 2017
- WO 555281 01; 11 CC Pump Insp and Oil Change; May 9, 2017
- PM 3119–1–11; 11 Component Cooling Pump Inspection; Revision 27
- WO 475414 05; 145–121, 11 CC Pump Seal Replacement (1R29); October 19, 2014
- WO 510057 01; PM 3119–1–11: 11 CC Pump and Motor Oil Sampling; October 16, 2016
- SP 1001B; Unit 1 Control Room Log–Modes 1 and 2; Revision 31
- CAP 1560073; FI–474 and FI–475 Exceed Deviation on SP 1001B; June 1, 2017
- 1C51.3; Instrument Failure Guide; Revision 22
- CAP 1555892; Approximately 800 Outstanding Engineering SP/TP's Reviews; April 17, 2017
- H10.1; ASME In-service Testing Program; Revision 39
- CAP 1555856; SP 1358 Not Completed for VC–2–2; April 16, 2017
- SP 1358; VC–2–2, RWST To Charging Pumps Check Valve Quarterly Test; April 17, 2017
- SP 1089B; Train B RHR Pump and Suction Valve From RWST Quarterly Test; June 19, 2017
- SP 1102; Unable to be Performed Due to Scaffold Interference; April 13, 2017
- CAP 1559275; WO 475578–01; MV–32094—12 RHR HX CC Inlet D70 was Moved to 2018; May 19, 2017
- SP 1366; Charging Pump Suction Valve Refueling Test; Revision 22

1EP2 Alert and Notification System Evaluation

- FEMA ANS Design Report; Revision 1
- Siren Testing and Maintenance Data; April 2015 through March 2017
- SP 1397; Emergency Plan Fixed Siren Test; Revision 25
- CAP 1554767; Siren Alert Testing on February 1, 2017; April 4, 2017

1EP3 Emergency Response Organization Staffing and Augmentation System

- CD 10.1; Emergency Response Organization; Revision 12
- SP 1744; Results from Emergency Organization Augmentation Response Tests for June 2015, September 2015, May 2016, and December 2016
- Current Qualification Records for Select Emergency Response Organization Staff

1EP5 Maintenance of Emergency Preparedness

- PINGP Emergency Plan; Revision 53
- FP-R-EP-01; Actual Event Investigation; Revision 6
- SAR 01470985; DRUM Emergency Preparedness: 2nd Quarter of 2015
- SAR 01487074; DRUM Emergency Preparedness: 3rd Quarter of 2015
- SAR 01504094; DRUM Emergency Preparedness: 4th Quarter of 2015
- SAR 01516561; DRUM Emergency Preparedness: 1st Quarter of 2016
- SAR 01524609; DRUM Emergency Preparedness: 2nd Quarter of 2016
- SAR 01531739; DRUM Emergency Preparedness: 3rd Quarter of 2016
- SAR 01537396; DRUM Emergency Preparedness: 4th Quarter of 2016
- PINGP Event Summary Report; Notification of Unusual Event on December 17, 2015; March 20, 2017
- PINGP Event Summary Report; Notification of Unusual Event on August 13, 2016; March 20, 2017
- PINGP Emergency Plan Exercise Critique Report; June 28, 2016
- CAP 1550240; EP Baseline NRC Inspection Readiness—PINGP, EAL and Emergency Plan Changes—PINGP; February 24, 2017
- Nuclear Oversight Audit Report; 2016 Nuclear Oversight PINGP Emergency Preparedness Audit; February 19, 2016
- Nuclear Oversight Audit Report; 2017 Nuclear Oversight PINGP Emergency Preparedness Audit; February 17, 2017
- CAP 1523683; EP FSA-Potential Trend in Notification Completion Timeliness; Dated May 31, 2016
- CAP 1526809; 2016 EP Exercise–Alert Notification Took 16 Minutes to Complete; June 29, 2016
- CAP 1529312; EOF Functional but Degraded Due to Loss of 10/XFMR; July 25, 2016
- CAP 1531616; NUE August 13, 2016– Completion of ORO Notification Not Timely; August 15, 2016
- CAP 1551586; While Performing TP 2745, D4 Diesel Generator Didn't Start; February 24, 2017
- CAP 1553141; Procedure Change Request for ANS, Revision 1; March 15, 2017
- CAP 1555664; NRC Comment from EP Inspection; April 13, 2017
- Most Current Review of Letters of Agreement with: Sacred Heart Hospital, Pierce County, Mayo Clinic Health System; North Memorial Medical Center, Goodhue County, Dakota County, and the City of Red Wing

1EP6 Drill Evaluation

- Prairie Island Nuclear Generating Plant Emergency Plan Drill May 23, 2017; Revision 1
- CAP 1559552; 05/23/2017 ERO DRILL, Offsite Agencies Not on Bridge Line; May 23, 2017
- CAP 1559571; 05/23/2017 ERO Drill—Offsite Sample Data Inaccuracies; May 23, 2017

4OA1 Performance Indicator Verification

- NRC Performance Indicator Data, Emergency Preparedness—Drill/Exercise Performance, Second Quarter of 2016 through Fourth Quarter of 2016
- NRC Performance Indicator Data, Emergency Preparedness—ERO Readiness, Second Quarter of 2016 through Fourth Quarter of 2016
- NRC Performance Indicator Data, Emergency Preparedness–Alert and Notification System Reliability, Second Quarter of 2016 through Fourth Quarter of 2016
- NRC Performance Indicator Data, Units 1 and 2, MSPI High Pressure Injection, Second Quarter of 2016 through First Quarter of 2017
- NRC Performance Indicator Data, Units 1 and 2, MSPI Heat Removal, Second Quarter of 2016 through First Quarter of 2017

4OA2 Identification and Resolution of Problems

- CAP 1549935; Follow Up NRC Question on Door 225 Transom; June 5, 2017
- CAP 1553868; Door 225 Transom Post Evolution Critique; March 23, 2017
- FP–PA–ARP–01; CAP Action Request Process; Revision 48
- FP–PA–CSE–01; Cause Evaluation Manual; Revision 1
- FP–PA–EFR–01; Effectiveness Review Manual; Revision 3
- CAP 1553950; Missed 8–Hour Report; March 24, 2017
- H66; High Energy Line Break Program; Revision 4
- CAP 1549935; Follow Up NRC Question on Door 225 Transom; March 8, 2017
- FP–WM–MMP–01; Minor Maintenance Process; Revision 5
- CAP 1560649; Inappropriate Closure of AR 01549935 to the Revision H27; June 8, 2017
- CAP 1557508; Trend in Plant Status Control Events, May 1, 2017
- CAP 501000000321; 1N44 Failed High; July 2, 2017
- CAP 1558708; Subject: NRC Question CAPs with MRE and No CE; May 12, 2017
- CAP 1554871; CD-34085 Gap Damper Failed to Close SP 2091; April 5, 2017
- CAP 1549882; 2N42 Power Range High Voltage Power Supply Failed; February 7, 2017
- CAP 1555639; Conduct CE for Closed CAP 01549882; April 13, 2017
- CAP 1558620; NRC Question – Past Operability Insufficient; May 11, 2017

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Document Access and Management System
AFW	Auxiliary Feed Water
AMSAC	Anticipated Transient Without Scram Mitigating System Actuation Circuitry
ANS	Alert and Notification System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	*Code of Federal Regulations*
DEP	Drill and Exercise Performance
EP	Emergency Preparedness
ERO	Emergency Response Organization
FIN	Fix-It-Now
HELB	High Energy Line Break
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IST	In-Service Test
MDO	Minnesota Duty Officer
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NOUE	Notice of Unusual Event
NRC	U.S. Nuclear Regulatory Commission
ORO	Off-Site Response Organization
PI	Performance Indicator
PINGP	Prairie Island Nuclear Generating Plant
PMT	Post Maintenance Test
POR	Past Operability Review
RCS	Reactor Coolant System
RWST	Reactor Water Storage Tank
SEC	Shift Emergency Communicator
SL	Severity Level
SM	Shift Manager
SRO	Senior Reactor Operator
SSC	Structure, System, and Component
TS	Technical Specification
TSO	Transmission System Operator
USAR	Updated Safety Analysis Report
WO	Work Order
WR	Work Request