



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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November 14, 2018

Mr. Scott Sharp
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 05000282/2018003 AND
05000306/2018003**

Dear Mr. Sharp:

On September 30, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. On October 18, 2018, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

Based on the results of this inspection, the NRC has identified four issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that three violations are associated with these issues. Because the licensee initiated condition reports to address these issues, the violations are being treated as Non-Cited Violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. The issues are described in the subject inspection report.

If you contest the violation or significance of any NCV, 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.

If you disagree with a 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, Chief
Branch 2
Division of Reactor Projects

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

Enclosure:
IR 05000282/2018003; 05000306/2018003

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Letter to Scott Sharp from Kenneth Riemer dated November 14, 2018

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2—NRC
INTEGRATED INSPECTION REPORT 05000282/2018003 AND
05000306/2018003.

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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: 05000282/2018003; 05000306/2018003

Enterprise Identifier: I-2018-003-0041

Licensee: Northern States Power Company, Minnesota

Facility: Prairie Island Nuclear Generating Plant, Units 1 and 2

Location: Welch, MN

Dates: July 1 through September 30, 2018

Inspectors: L. Haeg, Senior Resident Inspector
K. Pusateri, Resident Inspector
T. Ospino, Resident Inspector, Acting
S. Bell, Health Physicist

Approved by: K. Riemer, Chief
Branch 2
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee’s performance by conducting an integrated quarterly inspection at Prairie Island Units 1 and 2 in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC’s program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. Findings and violations being considered in the NRC’s assessment are summarized in the table below.

List of Findings and Violations

Failure to Repair a D2 Emergency Diesel Generator Jacket Water Leak per the Leak Management Process			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000282/2018003–01 Opened and Closed	[H.3] – Change Management	71111.15
The inspectors identified a finding of very low safety significance (Green) as of July 18, 2018, for the licensee’s failure to repair a D2 Emergency Diesel Generator (EDG) jacket water leak per the Leak Management Process.			

Failure to Maintain a Preventative Maintenance Strategy for 12 and 22 Cooling Water Pump Diesel Engines			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000282, 05000306/2018003–02 Opened and Closed	None	71152
The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of Prairie Island Technical Specification 5.4.1, “Procedures,” as of August 9, 2018, for the licensee’s failure to maintain a preventative maintenance strategy for sacrificial zinc anode plugs on the jacket water system for the 12 and 22 cooling water pump diesel engines (DDCLPs).			

Failure to Promptly Identify Degradation of the 122 Diesel Driven Cooling Water Pump Fuel Oil Storage Tank Vent Piping			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000282, 05000306/2018003–03; Closes URI 05000252/2018001–03	[P.2] – Evaluation	71152
The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” as of November 28, 2017, for the licensee’s failure to promptly identify a condition adverse to quality associated with 122 Diesel Driven Cooling Water Pump Fuel Oil Storage Tank (DDCLP FOST) vent piping.			

Failure to Promptly Identify and Correct 21 125 VDC Battery Lid Conditions Adverse to Quality			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000306/2018003-04; Closes URI 05000306/2018001-01	[H.14] – Conservative Bias	71152
The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," as of February 15, 2018, for the licensee's failure to promptly identify and correct conditions adverse to quality associated with the 21 125 VDC battery system.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000306/2018001-01	Questions Regarding Corrective Action Program, Use of Operating Experience, and Qualification of the 21 125 VDC Battery due to Cell Lid Cracking	71152	Closed
URI	05000282/2018001-02	Questions Regarding the Corrective Action and Aging Management Programs Following the Discovery of 122 Diesel Driven Cooling Water (DDCL) Pump Fuel Oil Storage Tank (FOST) Vent Piping Degradation	71152	Closed

TABLE OF CONTENTS

PLANT STATUS	5
INSPECTION SCOPES	5
REACTOR SAFETY	5
RADIATION SAFETY	8
OTHER ACTIVITIES – BASELINE.....	8
OTHER ACTIVITIES—TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL....	9
INSPECTION RESULTS	9
EXIT MEETINGS AND DEBRIEFS	18
DOCUMENTS REVIEWED	14

PLANT STATUS

Unit 1 began the inspection period at full power. On August 21, 2018, Unit 1 began coasting down in power as expected for the end of the operating cycle. On September 21, 2018, Unit 1 was shut down for refueling outage activities and remained shut down through the end of the inspection period.

Unit 2 operated at full power for the entirety of the inspection period with the exception of brief down-power maneuvers to support surveillance testing activities.

INSPECTION SCOPES

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

REACTOR SAFETY

71111.01—Adverse Weather Protection

Summer Readiness (1 Sample)

- (1) The inspectors evaluated summer readiness of offsite and alternating current (AC) power systems on July 5, 2018.

71111.04—Equipment Alignment

Partial Walkdown (3 Samples)

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

- (1) U1 offsite power to Bus 16 with the 1R transformer source breaker out-of-service for open phase modifications on August 14, 2018;
- (2) 12 Component Cooling Water during Bus 15 under-voltage testing on July 5, 2018; and
- (3) 122 Safeguards Traveling Screen w/121 Safeguards Traveling Screen out-of-service for planned maintenance on September 11, 2018.

Complete Walkdown (1 Sample)

- (1) The inspectors evaluated system configurations during a complete walkdown of the U1 Emergency Diesel Generators (EDGs) on August 14, 2018.

71111.05AQ—Fire Protection Annual/Quarterly

Quarterly Inspection (4 Samples)

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

- (1) Fire Area 33, 34, 35 & 36; Units 1 and 2 Battery Rooms on July 5, 2018;
- (2) Fire Area 71; Unit 2 Containment on July 3, 2018;
- (3) Fire Area 41 & 41A; Screenhouse Operating Floor; Elevation 695'; and
- (4) Fire Areas 20, 22, & 81; Buses 15 & 16 on September 10, 2018.

71111.06—Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protections for the Unit 1 Residual Heat Removal System on September 26, 2018.

71111.11Q—Licensed Operator Regualification Program and Licensed Operator Performance

Operator Regualification (1 Sample)

The inspectors observed and evaluated a licensed operator regualification exam in the control room simulator on August 28, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated operator performance during Unit 1 power reduction to shut down for refueling outage 1R31 on September 22, 2018.

71111.12Q—Maintenance Effectiveness

Routine Maintenance Effectiveness (1 Sample)

The inspectors evaluated the effectiveness of routine maintenance activities associated with:

- (1) Implementation of the licensee's Leak Management Program on August 3, 2018.

Quality Control (1 Sample)

The inspectors evaluated maintenance and quality control activities associated with the following equipment performance issues:

- (1) Various fluid leak repair work order packages during the week of September 24, 2018.

71111.13—Maintenance Risk Assessments and Emergent Work Control (5 Samples)

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

- (1) D2 EDG jacket water leak on July 24, 2018;
- (2) Unit 1 new fuel receipt on July 18, 2018;
- (3) 12 and 22 Diesel-Driven Cooling Water Pump (DDCLP) diesel oil cooler anode plug corrosion on August 9, 2018;
- (4) D6 EDG coolant leak on August 23, 2018; and
- (5) Maintenance risk for Work Week 1831 on August 6, 2018.

71111.15—Operability Determinations and Functionality Assessments (4 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) D2 EDG jacket water leak revised prompt operability determination (POD) on July 26, 2018;
- (2) D1 EDG exhaust leak on August 15, 2018;
- (3) D2 EDG jacket water leaks on August 27, 2018; and
- (4) Battery Room Heat-up, Revision 4.

71111.18—Plant Modifications (1 Sample)

The inspectors evaluated the following permanent modification:

- (1) 50.59 Evaluation 1143; Changes to C.18.1; Revision 0 on August 5, 2018; and

71111.19—Post Maintenance Testing (7 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Testing following 11 Turbine-Driven Auxiliary Feedwater Pump planned maintenance on July 13, 2018;
- (2) D2 EDG slow start test following planned maintenance on July 23, 2018;
- (3) D2 EDG fast start test following leak repairs on July 27, 2018;
- (4) D1 EDG testing following exhaust bellows replacement on August 15, 2018;
- (5) 12 DDCLP testing following oil cooler replacement on August 16, 2018;
- (6) D6 EDG following coolant hose replacements on August 27, 2018; and
- (7) D2 EDG testing following fuel injector o-ring replacements on September 18, 2018.

71111.20—Refueling and Other Outage Activities (Partial Sample)

The inspectors evaluated refueling outage 1R31 beginning September 21, 2018 through the end of the inspection period.

71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (5 Samples)

- (1) SP 2468.1; Unit 2 Generic Letter–08–01 Inspections for Mode 1, 3, and 4 on July 3, 2018;
- (2) SP 1093; D1 Diesel Generator Monthly Slow Start Test on July 9, 2018;
- (3) SP 1093; D1 Diesel Generator Monthly Slow Start Test on August 13, 2018;
- (4) SP 1101; 12 Motor-Driven Auxiliary Feedwater Pump Quarterly Flow & Valve Test on August 30, 2018; and
- (5) SP 1431; Main Steam Safety Valve Test (Power Operation) on September 20, 2018.

RADIATION SAFETY

71124.07—Radiological Environmental Monitoring Program

Site Inspection (1 Sample)

The inspectors evaluated the licensee’s radiological environmental monitoring program.

Groundwater Protection Initiative Implementation (1 Sample)

The inspectors evaluated the licensee’s groundwater monitoring program.

OTHER ACTIVITIES —BASELINE

71151—Performance Indicator Verification (6 Samples)

The inspectors verified licensee performance indicators submittals listed below:

- (1) BI01: RCS Specific Activity–2 Samples (Third Quarter 2017 through Second Quarter 2018);
- (2) BI02: RCS Leak Rate–2 Samples (Third Quarter 2017 through Second Quarter 2018);
- (3) OR01: Occupational Exposure Control Effectiveness–1 Sample (Fourth Quarter 2017 through Second Quarter 2018); and
- (4) PR01: RETS/ODCM Radiological Effluent Occurrences–1 Sample (Third Quarter 2017 through Second Quarter 2018).

71152—Problem Identification and Resolution

Annual Follow-Up of Selected Issues (4 Samples)

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

- (1) Apparent Cause Evaluation review on July 9, 2018 due to EDG reliability issues;
- (2) Equipment Cause Evaluation review following inspector identification of corrosion 12 and 22 DDCLP oil coolers on August 10, 2018;
- (3) Apparent Cause Evaluation review associated with URI 2018001–01, Battery Lid

- Cracking and Latent Operating Experience Trend Apparent Cause Evaluation on August 18, 2018; and
 (4) Apparent Cause Evaluation review associated with URI 2018001–02, 121 Fuel Oil Storage Tank Vent Degradation on September 24, 2018.

OTHER ACTIVITIES—TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

None.

INSPECTION RESULTS

71111.15—Operability Determinations and Functionality Assessments

Failure to Repair a D2 EDG Jacket Water Leak per the Leak Management Process			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000282/2018003–01 Opened and Closed	[H.3] – Change Management	IP 71111.15

Introduction:

The inspectors identified a finding of very low safety significance (Green) as of July 18, 2018, for the licensee’s failure to repair a D2 EDG jacket water leak per the Leak Management Process.

Description:

The inspectors questioned engineering judgment used within AR 501000012585 regarding an approximate 60 drops per minute (dpm) jacket water leak between cylinders 5C and 6C of the D2 EDG observed during surveillance testing on May 29, 2018. Specifically, the inspectors were concerned that there were several unknown issues, including leak source and type, condition of the joint, etc. In response, the licensee issued a new AR and performed a prompt operability determination (POD). This POD evaluated the likely sources of the leak, noting that the leak “self-sealed” as the engine reached nominal load, and that D2 was operable. The inspectors reviewed the POD and questioned whether the leak should be subject to an adverse condition monitoring plan based on continued unknowns and assumptions about the leak, and to establish criteria at which the leak would no longer be acceptable. The licensee initially agreed with creating a monitoring plan, but later determined that it was unnecessary due to existing monitoring by system engineering and non-licensed operator observations.

Prior to the next monthly surveillance, the licensee elected to remove D2 from service and to identify the source of the jacket water leak. The licensee determined that the leak originated from the jacket water bypass fitting cover gasket connection between cylinders 5C and 6C. The licensee verified that the gasket was properly torqued and that there was no gasket extrusion. During the next test of D2 on June 25, 2018, the maximum leakage seen at the fitting cover location was approximately 32 dpm which eventually sealed itself as the engine was unloaded. Based in part on the leak rate remaining within the prior POD-evaluated value and the verification of torque on the bypass fitting cover fasteners, the station concluded the D2 EDG was operable and decided to continue monitoring the leak during future surveillance testing.

On or around July 18, 2018, the inspectors further questioned the POD regarding new information gathered prior to the June 25, 2018 testing, and again, asked if a monitoring plan was needed. The licensee agreed to revise the POD, but again decided that a monitoring plan was unnecessary. At this point, the inspectors recognized during review of the CAP that a “self-sealing” jacket water leak was first noted at the 5C and 6C D2 location on August 28, 2017, and again on November 15, 2017. The inspectors also recognized that the revised POD referenced FP–WM–LMP–01, “Leak Management Process,” (implemented at Prairie Island on October 23, 2017) as the means for monitoring, tracking, trending, and prioritizing repairs of the leak. The inspectors asked how this process was being applied for the D2 jacket water leak since implementation of the process. The licensee determined that this leak was never entered into the process. Subsequently, the inspectors noted that per the process, the leak should have been classified as a Priority 3 leak upon discovery on November 15, 2017, and repaired within 28 weeks of initial identification. The licensee entered this concern into the CAP as AR 501000014540, generated actions to address the extent of leaks not captured within the leak monitoring process, and performed condition evaluations to determine why this process was not fully implemented for the D2 leakage.

During the next monthly slow start surveillance test on July 23, 2018, the D2 jacket water leak increased to a maximum of 110 dpm and was slower to “self-seal.” Based on the characteristics of the leak changing from prior evaluated conditions, the shift manager declared the D2 EDG inoperable. The licensee disassembled the bypass fitting cover between cylinders 5C and 6C (location of leak) and did not readily identify any issues with the condition of the gasket or the sealing surfaces.

Corrective Actions: For the D2 EDG jacket water leak, the licensee replaced the cover and gasket, and also took the opportunity to address several other minor leaks prior to returning the D2 EDG to service. The licensee also performed an equipment cause evaluation, forensic analysis of the cover and gasket, and a past operability review and determined that the cause of the leaking bypass fitting cover was likely due to a slight out-of-flatness condition that was either in place or developed since original installation. The inspectors determined that the cause of the leak was not within the licensee’s ability to foresee and correct.

For the concerns related to implementation of the leak management process, the licensee fully identified, categorized, and prioritized in-scope leaks into the process; took actions to clearly identify a process owner to ensure that the process requirements were met going forward; re-opened a change management plan; and elected to perform a 6-month effectiveness review after the process was fully in place to ensure leaks were being addressed per the process.

Corrective Action Reference: AR 501000014540; Leaks in the Plant are not Consistently Dispositioned in Accordance with the Leak Management Process (FP–WM–LMP–01); July 18, 2018

Performance Assessment:

Performance Deficiency: The inspectors determined that failing to meet the self-imposed voluntary initiatives of FP–WM–LMP–01, “Leak Management Process,” Revision 0 (a self-imposed voluntary initiative) to prioritize, monitor, and correct a 60 dpm jacket water leak from the D2 EDG within 28 weeks of November 15, 2017 (issue of concern) was a performance deficiency. The cause of the issue of concern was reasonably within the licensee’s ability to foresee and correct and the issue of concern should have been prevented. Specifically, following the issuance of FP–WM–LMP–01 at Prairie Island on October 23, 2017, a 60 dpm

jacket water leak was identified on the D2 EDG on November 15, 2017. Following issuance of AR 50100005488 on that date, the leak was not prioritized, monitored, nor corrected within 28 weeks of identification per the process. This resulted in the leak not being repaired before D2 EDG was declared inoperable due to the leak on July 23, 2018.

Screening: The inspectors determined the performance deficiency was more than minor because it adversely affected the Mitigating Systems Cornerstone Attribute of Equipment Performance to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, by not adhering to the initiatives within FP-WM-LMP-01, the ongoing availability, reliability, and capability of the D2 EDG was not ensured due to a Priority 3 jacket water leak.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” The finding was determined to be of very low safety significance (Green) because the inspectors answered Yes to Question A.1 under Exhibit 2 – Mitigating Systems Screening Questions due to the finding being a deficiency affecting the qualification of the mitigating SSC for which the SSC maintained its operability.

Cross-Cutting Aspect: The finding had a cross-cutting aspect in the Change Management component of the Human Performance cross-cutting area, which states that the licensee will use a systematic process for evaluating and implementing change so that nuclear safety remains the overriding priority. Specifically, several critical actions were not performed as part of the licensee’s transition from the existing to the new leak management process on October 23, 2017, that resulted in unclear ownership and responsibilities of site personnel. (H.3)

Enforcement:

The inspectors did not identify a violation of regulatory requirements associated with this finding.

71152—Problem Identification and Resolution

Failure to Maintain a Preventative Maintenance Strategy for 12 and 22 Cooling Water Pump Diesel Engines			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000282/2018003-02 Opened and Closed	None	71152
<u>Introduction:</u>			
The inspectors identified a finding of very low safety significance (Green) and associated NCV of Prairie Island Technical Specification 5.4.1, “Procedures,” as of August 9, 2018, for the licensee’s failure to maintain a preventative maintenance strategy for sacrificial zinc anode plugs on the jacket water system for the 12 and 22 cooling water pump diesel engines (DDCLPs).			

Description:

On August 9, 2018 the inspectors identified severely corroded zinc anode plugs on the 12 and 22 DDCLP engine jacket water/lubricating oil heat exchangers during plant status walk downs of safety-related equipment. The inspectors immediately informed the duty shift manager of the degraded condition. The shift manager initially determined the equipment to be operable, but requested a prompt operability determination to verify that the condition did not impact the DDCLP safety functions. During engineering review of the issue on August 10, 2018, it was determined that the corrosion was to an extent that the jacket water pressure boundary was in question and reasonable assurance of operability no longer existed. At that point, the shift manager declared both the 12 and 22 DDCLPs inoperable and LCO 3.0.3 was entered for both Units 1 and 2, requiring actions to be initiated within 1 hour to place both units in Mode 3 within 7 hours. Approximately one hour later, the 121 motor-driven cooling water pump was aligned to the "A" cooling water header, allowing exit from LCO 3.0.3 for both units, and entry into a 14-day LCO for the "B" cooling water header remaining inoperable. Subsequently, the licensee made an 8-hour non-emergency notification to NRC per 10 CFR 50.72(b)(3)(v). See equipment corrective actions below.

On August 24, 2018, the licensee completed an equipment cause evaluation and determined that in 1989, station reviews of vendor recommendations determined that periodic inspection of the plugs was not necessary due to the DDCLP jacket cooling medium not being salt water. In November of 1995, annual inspections of the plugs was removed from annual preventive maintenance procedures PM 3002-2-12[22], "12[22] DDCLP Diesel Minor Periodic Maintenance". On September 1, 2018, the licensee completed a past operability review (POR) and concluded that both the 12 and 22 DDCLPs would have been capable of performing their specified safety functions for the as-found conditions based on post-removal bench testing of the heat exchangers and forensic analyses.

Corrective Actions: The licensee replaced the 22 DDCLP heat exchanger, installed a refurbished heat exchanger on the 12 DDCLP, and performed extent of condition reviews. The licensee was developing final corrective actions to address the lack of preventive maintenance at the end of the inspection period.

Corrective Action Reference: AR 501000015410, Diesel Driven Cooling Water Pumps Degraded Anodes

Performance Assessment:

Performance Deficiency: The inspectors determined that failing to maintain a preventative maintenance strategy for sacrificial zinc anode plugs on the jacket water system for the 12 and 22 DDCLP diesel engines to preclude excessive corrosion that could challenge operability (issue of concern) was a performance deficiency. The cause of the issue of concern was reasonably within the licensee's ability to foresee and correct and the issue of concern should have been prevented. Specifically, the basis for removal of preventive maintenance tasks for the anode plugs was inappropriate considering the wearable aspects of the plugs. Further, the corrosion conditions were not identified during multiple walk downs and inspections of the equipment since November of 1995 to reveal the inappropriate removal of the PM task.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, not having a preventive maintenance strategy to specify inspection or

replacement of parts that have a specific lifetime (in this case, sacrificial zinc anode plugs) could have led to further degradation which would have had the potential for failure of the limited-volume jacket water system pressure boundary for the 12 and/or 22 DDCLP.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings at-Power.” The finding screened as very low safety significance (Green) because the inspectors answered Yes to Question A.1 under Exhibit 2-Mitigating Systems Screening Questions due to the finding being a deficiency affecting the qualification of the mitigating SSCs for which the SSCs maintained their operability.

Cross-Cutting Aspect: No cross-cutting aspect was assigned to this finding because the performance deficiency occurred in November of 1995 and therefore was not indicative of present licensee performance.

Enforcement:

Violation: Technical Specification 5.4.1, “Procedures” states, 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.”

NRC Regulatory Guide 1.33, Revision 2, Appendix A, Section 9 addresses “Procedures for Performing Maintenance” and Section 9.b addresses “Preventative maintenance schedules should be developed to specify lubrication schedules, inspections of equipment, replacement of such items as filters and strainers, and inspection or replacement of parts that have a specific lifetime such as wear rings.”

Contrary to the above, between circa November of 1995 and August 9, 2018, the licensee failed to maintain a written procedure covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, Section 9.b. Specifically, the licensee’s preventative maintenance procedures PM 3002–2–12[22], “12[22] DDCLP Diesel Minor Periodic Maintenance” failed, in part to include provisions to ensure “inspection or replacement of parts that have a specific lifetime”. In this case, sacrificial zinc anode plugs within the safety-related 12 and 22 DDCLP jacket water system did not have inspection or replacement provisions.

Disposition: This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy.

71152—Problem Identification and Resolution

Failure to Promptly Identify Degradation of the 122 DDCLP FOST Vent Piping			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000252/2018003–03; Closes URI 05000252/2018001–02	[P.2] – Evaluation	IP 71152

Introduction:

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” as of

November 28, 2017, for the licensee's failure to promptly identify a condition adverse to quality associated with 122 DDCLP FOST vent piping.

Description:

On November 28, 2017, the inspectors identified a small hole in the vent piping for the below-ground 122 DDCLP FOST (fuel oil supply for the 22 DDCLP). Refer to Unresolved Item 05000252/2018001-02 within Prairie Island NRC Inspection Report 2018001 for more details surrounding the licensee's response to the condition. After correcting the issue (replacing the section of pipe), the inspectors were provided the final apparent cause evaluation for the issue during the week of June 25, 2018. The inspectors reviewed the apparent and contributing causes of the issue and noted prior corrective action timeliness issues within the corrective action program, a lack of implementation of the renewed operating license external surfaces monitoring aging management program, and poor interaction between these two programs to ensure that the degradation did not reach the point of a hole developing in the piping. Overall, the ACE was conducted in a thorough manner to address all identified deficiencies.

Corrective Actions: The licensee replaced the degraded section of the 122 DDCLP FOST vent piping as well as similar adjacent vent piping for the 121 DDCLP and diesel-driven fire pump FOSTs, and initiated several procedural changes to ensure more effective implementation and ownership of the aging management programs at the station.

Corrective Action Reference: AR 501000010169, Response to Degraded FOST Vent Pipe, March 30, 2018

Performance Assessment:

Performance Deficiency: The inspectors determined that failing to effectively implement the external surfaces monitoring aging management program between July of 2015 and November 28, 2017, to preclude development of a hole in the 122 DDCLP FOST vent pipe (issue of concern), was a performance deficiency. The cause of the issue of concern was reasonably within the licensee's ability to foresee and correct and the issue of concern should have been prevented. Specifically, the licensee failed to implement several portions of H65.2.14, External Surfaces Monitoring Aging Management Program that required, in part, detection, monitoring and trending, acceptance criteria, and corrective actions for aging effects identified at the station.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, if ownership and implementation problems with the external surfaces monitoring aging management program had gone uncorrected, aging mechanisms affecting other plant components had the potential to become more significant.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The finding was determined to be of very low safety significance (Green) because the inspectors answered Yes to Question A.1 under Exhibit 2 – Mitigating Systems Screening Questions due to the finding being a deficiency affecting the qualification of the mitigating SSC for which the SSC maintained its operability.

Cross-Cutting Aspect: The finding had a cross-cutting aspect in the Evaluation component of the Problem Identification and Resolution cross-cutting area, which states that the licensee

will thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, after identifying degradation of the 122 DDCLP FOST vent pipe in July of 2015, the licensee failed to properly determine the degradation rate from an aging management perspective. This resulted in not resolving the issue prior to identification of a hole in the vent pipe that had the potential to impact the 22 DDCLP fuel oil supply. (P.2)

Enforcement:

Violation: Title 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” requires, in part, that conditions adverse to quality, such as deficiencies and defective equipment, are promptly identified.

Contrary to the above, as of November 28, 2017, the licensee failed to identify a condition adverse to quality. Specifically, degradation that led to a through-wall hole in the safety-related 122 DDCLP FOST vent pipe, a condition adverse to quality, was not promptly identified due to ineffective implementation of the licensee’s corrective action and aging management programs when corrosion and pipe wall thinning was first identified in July of 2015.

Disposition: This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the “Enforcement Policy.”

The disposition of this finding and associated violation closes URI 05000252/2018001–02.

71152—Problem Identification and Resolution

Failure to Promptly Identify and Correct 21 125 VDC Battery Lid Conditions Adverse to Quality			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000306/2018003–04; Closes URI 05000306/2018001–01	[H.14] – Conservative Bias	IP 71152

Introduction:

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” as of February 15, 2018, for the licensee’s failure to promptly identify and correct conditions adverse to quality associated with the 21 125 VDC battery system.

Description:

During the week of February 12, 2018, the inspectors identified through-lid cracks on several battery cells within the 21 125 VDC battery system. The inspectors reviewed CAP history, vendor and operating experience information, and battery inspection procedures to determine whether the licensee had previously identified the cracking condition in the past as a condition adverse to quality. After determining that the licensee had identified the cracks as conditions adverse to quality as early as 2009, the inspectors raised the following concerns to the licensee on February 15, 2018, noting:

- inconsistencies in how new/worsening cracks were identified in the CAP and that no interim monitoring or corrective actions were established because all battery cells were originally planned for replacement in the Fall of 2017, but were deferred to the Fall of 2019 due to availability issues. Particularly, the inspectors pointed out cracks that were of various severity that were not previously identified by the licensee in the CAP;
- that the licensee had not contacted the vendor for recommendations to address the cracking issue as part of original identification of the issue, nor during their 2017 decision making process to defer cell replacement; and
- that the licensee had not evaluated the condition within their operability process to determine whether the 21 battery system was fully qualified (i.e. not degraded or non-conforming), and therefore did not consider whether corrective actions or compensatory measures were not appropriate to ensure the condition did not continue to worsen over time such that foreign material could enter the battery, nor potential bypassing of the installed flame arrestors would not impact battery operability.

After raising these concerns, the licensee initially concluded that the 21 battery remained fully qualified due to the lid cracking conditions. Refer to Unresolved Item 05000306/2018001-01 within Prairie Island NRC Inspection Report 2018001 for more details surrounding the timeline of subsequent interactions between the inspectors and the licensee. Ultimately, following issuance of the URI, the licensee revised the initial POD and concluded that the 21 125 VDC battery system was operable but non-conforming due to the lid cracking conditions.

Corrective Actions: The licensee performed detailed inspections of the 21 battery to ensure that all cracks were captured within the corrective action program, applied epoxy sealant to the 21 battery lid cracks per vendor instructions on April 23, 2018, completed an apparent cause evaluation for the issue on June 27, 2018, modified inspection procedures for the batteries to specifically monitor for cracking, and completed an additional apparent cause evaluation on July 24, 2018, that reviewed, in part, the causes surrounding the licensee's use of operating experience and vendor information at the station.

Corrective Action Reference: AR 501000010554, POD for 21 Battery Needs Revision, April 9, 2018

Performance Assessment:

Performance Deficiency: The inspectors determined that failing to completely identify and properly evaluate operability of the 21 125 VDC battery system cell lid cracking conditions adverse to quality (issue of concern) following questioning by the inspectors on February 15, 2018, was a performance deficiency. The cause of the issue of concern was reasonably within the licensee's ability to foresee and correct and the issue of concern should have been prevented. Specifically, upon initial completion of a POD per FP-OP-OL-01, "Operability/Functionality Determination," following inspector questioning, the licensee concluded that the 21 battery remained operable and fully qualified considering the lid cracking condition, and therefore no corrective actions or compensatory measures were needed to address the condition. However, upon further questioning by the inspectors, the licensee revised the POD and determined that the 21 battery was operable but non-conforming due to the condition and application of epoxy per vendor instructions was appropriate.

Screening: The inspectors determined the performance deficiency was more than minor because it adversely affected the Mitigating Systems Cornerstone Attribute of Equipment Performance to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, by not fully identifying and correcting conditions adverse to quality, the ongoing availability, reliability, and capability of the 21 battery system was not ensured.

Significance: The inspectors assessed the significance of the finding using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” The finding screened as very low safety significance (Green) because the inspectors answered Yes to Question A.1 under Exhibit 2—Mitigating Systems Screening Questions due to the finding being a deficiency affecting the qualification of the mitigating SSC for which the SSC maintained its operability.

Cross-Cutting Aspect: The finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area, which states that individuals use decision making-practices that emphasize prudent choices over those that are simply allowable. A proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, licensee decision making practices associated with 21 battery cell replacement deferral and subsequent operability conclusions did not demonstrate prudence to address cell lid cracking conditions. (H.14)

Enforcement:

Violation: Title 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” requires, in part, conditions adverse to quality, such as deficiencies and non-conformances are promptly identified and corrected.

Contrary to the above, as of February 15, 2018, the licensee failed to promptly identify and correct conditions adverse to quality. Specifically, through-lid cracks on 36 of 58 battery cells within the safety-related 21 battery system, conditions adverse to quality, were not promptly identified and corrected due to inadequate inspection guidance and criteria, incorrect operability considerations, and ineffective operating experience reviews during cell replacement deferral decision making in the Fall of 2017.

Disposition: This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the “Enforcement Policy.”

The disposition of this finding and associated violation closes URI 05000306/2018001–01.

71152—Problem Identification and Resolution

Observation	IP 71152
<p>The inspectors reviewed an Apparent Cause Evaluation associated with AR 501000011168, “EDG Reliability Challenges”, performed by the licensee to review organizational issues associated with an adverse trend in EDG testing failures. This evaluation noted 11 EDG reliability issues that had occurred since 2009 for which common underlying themes were not well understood. The common theme identified as the apparent cause was associated with precision maintenance practices not being incorporated into EDG procedures. The evaluation also reviewed applicable vendor information and operating experience and ultimately established corrective actions to review and enhance existing preventive maintenance</p>	

procedures. The inspector's assessment of this evaluation was that the common theme was correctly identified and that corrective actions appeared appropriate to address the apparent cause.

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect from public disclosure. No proprietary information was documented in this report.

- On August 23, 2018, the inspector presented the radiation protection program inspection results to Mr. D. Allison, Acting Plant Manager, and other members of the licensee staff.
- On October 18, 2018, the inspectors presented the quarterly integrated inspection results to Mr. S. Sharp, Site Vice President, and other members of the licensee staff.

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.

71111.01—Adverse Weather

- AR 501000014215; Grid Condition Notifications from TSO; 07/10/2018

71111.04 Q&S—Equipment Alignment

- SP 1118; Verifying Paths From the Grid to U-1 Buses; Revision 34
- NF-239270; Prairie Island Plant and Substation Operating One Line Diagrams
- FP-G-DOC-03; Procedure and Work Instruction Use and Adherence; Revision 16
- C1.1.20.7-5; D2 Diesel Generator Valve Status; Revision 26
- NF-39255-1; Flow Diagram Diesel Generators D1 & D2 Unit 1 & 2; 07/08/2018
- AR 500001535823; 12 AFWP LO Suction Press Switch 17776 OOT; 09/27/2016
- AR 500001539331; 12 AFW Motor—Overload Alarm Setpoint; 10/25/2016
- C1.1.20.7-4; D1 Diesel Generator Circuit Breakers and Panel Switches; Revision 15
- B38A; Unit 1 Diesel Generators; Revision 14
- C1.1.20.7-3; Diesel Generator D1 Main Control Room Switch and Indicating Light Status; Revision 15
- Diesel Generator D2 Main Control Room Switch and Indicating Light Status; Revision 13
- NX-236968-1; D1/D2 Diesel Generator Air Start Piping; 01/23/13
- C1.1.20.7-1; D1 Diesel Generator Valve Status; Revision 27
- C1.1.20.7-8; D2 Diesel Generator Circuit Breakers and Panel Switches; Revision 18
- C1.1.35-3; Cooling Water System; Revision 39
- C1.1.14-1; Unit 1 Component Cooling System; Revision 35
- NF-39245-1; Flow Diagram Component Cooling System Unit 1; 06/28/18
- SP 1855; Monthly 4kV Bus 15 Undervoltage Relay Test (Omicron); Revision 8

71111.05AQ—Fire Protection

- Fire Detection Zone 42—Reactor Building Unit 2, Elevation 697'6"; F5 Appendix A; Revision 18
- Fire Detection Zone 56—Reactor Building Unit 2, Elevation 711'; F5 Appendix A; Revision 18
- Fire Detection Zone 52—Reactor Building Unit 2, Elevation 733'9"; F5 Appendix A; Revision 28
- Fire Detection Zone 54—Reactor Building Unit 2, Elevation 755'; F5 Appendix A; Revision 13
- Fire Detection Zone 1—Turbine Building Battery Room 11 & 12, Elevation 695'; F5 Appendix A; Revision 27
- Fire Detection Zone 35—Turbine Building Battery Room 21 & 22, Elevation 695'; F5 Appendix A; Revision 30
- Fire Detection Zone 74—Screenhouse Ground Floor, Elevation 670'; F5 Appendix A; Revision 34
- Fire Detection Zone 75—Cable/Fuel Oil/Misc.; Elevation 670'; F5 Appendix A; Revision 34
- Fire Protection Systems Functional Requirements; F5 Appendix K; Revision 26
- Fire Strategies Symbols Legend; F5 Appendix A; Revision 39
- PINGP 791, Operating Information No 18–24; June 2019
- AR 501000015870; Incipient System Failure Trend; 08/20/2018
- AR 501000015891; NRC Question—Foam Storage; 08/19/2018
- F5 Appendix A; Fire Detection Zone 11; Revision 41
- F5 Appendix A; Fire Detection Zone 11—Fire Area 20 & 81 (Diagram); Revision 41
- F5 Appendix F; Fire Hazard Analysis—Table 3-Appendix R Fire Area Descriptions—Fire Area 22; Revision 35
- F5 Appendix R; Fire Hazard Analysis—Table 3-Appendix R Fire Area Descriptions—Fire Area 81; Revision 35

71111.06—Flood Protection Measures

- H36; Plant Flooding; Revision 11

71111.13—Maintenance Risk Assessments and Emergent Work

- AR 501000014751; 334–021 FO Leak West Cyl 3; 07/24/2018
- AR 501000014783; LITF Observation of D2 DG Surveillance; 07/23/2018
- AR 501000014699; Challenges with MOC 601000000058 Approve; 07/23/2018
- AR 501000014716; D2 Exhaust Cylinder TC's Backing Nut Damage; 07/24/2018
- AR 501000014751; 034–021 FO Leak West Cyl 3; 07/23/2018
- AR 501000014755; Flange Surface Defect on D2; 07/23/2018
- AR 501000014770; 7/24 Plant Status Report Inaccuracies; 07/24/2018
- AR 501000014783; LITF Observation of D2 DG Surveillance; 07/23/2018
- AR 501000014811; Delays in Tagging Out D2 D/G; 07/25/2018
- AR 501000014640; Transfer Beam Stops Prevent W Hoist Into SFP; 07/20/2018
- AR 501000014598; Potential New Fuel Manufacturing Issue; 07/20/2018
- AR 501000014765; LITF Observation 7/25/18; 07/25/2018
- AR 501000014684; Door 104B (outside door) Will Not Open; 07/23/2018
- D9; New Nuclear Fuel and Insert Technical Evaluation; Revision 61
- WO 700028907; D2 DG(034–021) 6–Month Inspection; 07/23/2018
- AR 0501000014713; Equipment Cause Evaluation—D2 Coolant Leak Monitoring; 07/23/2018

- AR 501000015410; Equipment Cause Evaluation—Diesel Driven Cooling Water Pumps Degraded Anodes; 09/09/2018
- AR 501000001981; Jacket Coolant Leak on D2 Diesel Generator; 08/28/2018
- AR 501000005488; Coolant Leak on East Side of D2; 11/15/2017
- AR 501000012585; D2 Water Jacket Cooling Leak; 05/29/2018
- AR 501000013665; D2 Coolant Leak Rate Monitoring June 18; 06/25/2018
- AR 501000014713; D2 Coolant Leak Monitoring July 2018; 07/22/2018
- AR 501000014540; Leaks in the Plant are not Consistently; 07/18/2018
- AR 501000012585; Prompt Operability Determination 07/18/2018
- SOMS Narrative Log Search; 07/25/2018
- AR 501000014755; Flange Surface Defect on D2; 07/23/2018
- WO 700040695; Nuclear Emergent Issue Management—D2 Jacket Water Leak; 07/23/2018
- AR 501000014291; Several Unit 1 Emergency Diesel Generator Leaks Not in LMP; 07/12/2018
- WO 700040695–0020; Repair D2 Jacket Water Cooling Leaks; 07/23/2018
- AR 501000014294; D1 LO Seepage Above 1DG–55; 07/11/2018
- AR 501000014277; D1 Fuel Oil Seepage on Fittings Below FO–51–1; 07/11/2018
- AR 501000014208; NRC Questions on D2 Water Jacket Leakage; 07/10/2018
- AR 501000014286; D2 Fuel Oil Seepage on Fittings Below FO–51–2; 07/12/2018
- AR 501000014307; D2 Coolant Leak From Packing on 2DG–15; 07/12/2018
- AR 501000014313; D2 Coolant Leak From on Turbo; 07/12/2018
- AR 501000014315; D2 Tube Oil Leak Around Fuel Oil Pump Mounting; 07/12/2018
- FP–WM–LMP–01; Leak Management Process; Revision 1
- AR 501000014712; DC Ground During SP Speed Setting; 07/23/2018
- AR 501000014629; D2 Ground 7/23/18 Troubleshooting Observation; 07/23/2018
- AR 501000014713; D2 Coolant Leak Monitoring July 2018; 07/22/2018
- AR 501000014099; D1 Exhaust Insulation Cracked; No Date
- AR 501000014783; LITF Observation of D2 DG Surveillance; 07/23/2018
- WO 700006215; D1 Emergency Diesel Generator—1DG–20 Leaking; 09/10/2018
- WO 700041083; Minor Oil Leak D1 Lube Oil Strainer Top; 06/17/2018
- WO 700041083; Minor Oil Leak D1 Lube Oil Strainer Top; 08/15/2018
- WO 700008683; D1 Diesel Engine Vibrations Reading Below; 08/15/2018
- WO 700034805; D1 Start Air CK Valve, Minor Air Leak; 08/15/2018
- WO 700023870; (5010000000470_D1 Lube Oil Hi Temp Alarm; 08/15/2018
- WO700041845; D1 Exhaust Leak on OCS Turbo Protector; 08/15/2018
- AR 501000015656; NRC Questions During D1 Repair Activity; 08/14/2018
- SP 1093; D1 Diesel Generator Monthly Slow Start Test; Revision 103

71111.15—Operability Evaluations

- AR 501000015634; MO 700041845—D1 Exhaust Discovery; 08/14/2018
- AR 501000015548; D1 Exhaust Leak on OCS; 08/13/2018
- AR 501000016481; Battery Room Temperatures with Doors Open per C18.1; 09/04/2018

71111.18—Plant Modifications

- 50.59 Evaluation No. 1143; Changes to C18.1 to Incorporate Manual Actions as Compensatory Measures; Revision 0
- ENG–ME–847 Calculation; HELB Case Specific Inputs & SEA Room Heat Up; Revision 0
- C18.1; Engineered Safeguards Equipment Support Systems; Revision 50

71111.19—Post Maintenance Testing

- SP 1305; D2 Diesel Generator Monthly Slow Start Test; Revision 58
- SP 1307; D2 Diesel Generator 6 Month Fast Start Test; Revision 53
- AR 501000014712; DC Ground During SP 1305 Speed Setting; 07/23/2018
- AR 501000014629; D2 Ground 7/23/18 Troubleshooting Observation; 07/23/2018
- AR 501000014713; D2 Coolant Leak Monitoring July 2018; 07/22/2018
- AR 501000015582; Unexpected Annunciator 70350–0105 Low Jacket Water Temp on 22 DDCLP; 08/14/2018
- AR 501000014236; Pressure Switch Found Out of Tolerance; 07/11/2018

71111.20—Refueling Outage

- 1R31 Refueling Outage Sept. 2018—Shutdown Safety Assessment
- 1C1.3–M3; Unit 1 Shutdown to Mode 3; Revision 2
- 1C1.3–M2; Unit 1 Shutdown to Mode 2; Revision 2
- SP 1036; Turbine Overspeed Trip Exercise; Revision 32

71111.22—Surveillance Test

- SP 2468.1; Unit 2 GL–08–01 Inspections For Mode 1, 3, and 4; Revision 2
- SP 1093; D1 Diesel Generator Monthly Slow Start Test; Revision 103
- IP 2871A; 12 MD AFW Pump Discharge P; (No Date)
- SP1055; 12 MD AFW Pump Suction Strainer Outlet PI; (No Date)
- SP1101; 12 MD AFWPQTR Flow & Valve Test; 08/22/2018
- H10.1; ASME Inservice Testing Program; Revision 40
- Figure B14–1—Unit 1 Component Cooling Water System; Revision 13
- AR 501000016536; GAMP: Unacceptable Void Found in 2RH–01; 09/04/2018
- SP 2468.1; Unit 2 GL–08–01 Inspections For Mode 1, 3, and 4; Revision 2
- H64; Gas Accumulation Management Program; Revision 10

71124.07—Radiological Environmental Monitoring Program

- Self Assessment for Inspection Procedure 71124.07; 2018
- 2017 Annual Radioactive Effluent Report and Offsite Dose Calculation Manual; May 14, 2018
- 2017 Annual Radiological Environmental Monitoring Program Report; May 14, 2018
- Offsite Dose Calculation Manual; Revision 32
- H4.2; Offsite Dose Calculation Manual (ODCM) Supporting Data; Revision 5
- ODCM Change Documentation; Revision 32
- EPRI Prairie Island Groundwater Protection Program Assessment; August 2017
- Meteorological Data Review for Calendar Years 2016 to 2016 and Comparison 2002 to 2006
- Meteorological Data Summary Data; 2017
- Meteorological Tower Calibration; October 23, 2017

- Meteorological Tower Calibration; July 30, 2018
- TP1676; Meteorological Instruments Calibration; Revision 17
- Joint Frequency Distribution Data; March 2017
- Compliance Filing Well Monitoring Report Second Quarter 2018; August 24, 2018
- Environmental Air Sampler Calibration Records; March 2018
- 2017 Land Use Census, September 12, 2017
- CY-ENVR-862; River and Groundwater Monitoring Well Sampling; Revision 3
- RPIP 4700; Radiological Environmental Monitoring Program; Revision 14
- RPIP 4710; Annual Land Use Census and Critical Receptor Identification; Revision 10
- RPIP 4730; REMP Sampling; Revision 6
- AR 501000001031; REMP P-4 Air Flow Obstruction; July 26, 2017
- AR 501000001091; Trees Too Tall Near Met Tower; July 27, 2017
- AR 501000008351; Lost REMP Environmental TLD; February 14, 2018
- AR 501000013737; REMP TLD P-09BB is Missing; June 27, 2018

71151—Performance Indicator Verification

- ED Alarm Records; Fourth Quarter 2017 through Second Quarter 2018
- Dosimetry Investigation Information; Fourth Quarter 2017 through Second Quarter 2018
- CAP Records for Radiation Protection; Fourth Quarter 2017 through Second Quarter 2018
- Radiological Effluent Dose Summary Data; Third Quarter 2017 through Second Quarter 2018
- Reactor Coolant System DEI Data; Third Quarter 2017 through Second Quarter 2018

71152—Problem Identification and Resolution

- AR 501000016271; D1/D2 Design Improvement Recommendations; 08/27/2018
- AR 501000011168; Emergency Diesel Generator Reliability Challenges; 04/24/2018
- AR 501000015410; Corroded Drain Plugs on 12 and 22 DDCWP; August 8, 2018
- PM 3002-2-12; 12 Diesel Cooling Water Pump Annual Inspection; Revisions 12 & 13