Prairie Island 2
3Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2015
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
UNTIMELY RESOLUTION OF ENVIRONMENTAL QUALIFICATION ISSUES.
A self-revealing finding of very low safety-significance and a non-cited violation of 10 CFR 50.49 was identified on March 5, 2015, for the licensee's failure to keep environmental qualification (EQ) files current and the failure to replace or refurbish EQ electrical equipment at the end of its designated life. Specifically, the licensee initiated CAP 1431268 in May 2014 to document numerous EQ file errors identified during an in-depth review of the EQ program. These file errors resulted in the EQ designated life for multiple safety-related solenoid valves being non-conservative such that some solenoids were installed beyond their designated life. Corrective actions included taking action to revise the incorrect EQ files and replacing the safety-related solenoids installed beyond their designated life.

The inspectors determined that this issue was more than minor because if left uncorrected the failure to maintain the EQ files and to replace or refurbish EQ equipment could result in a more significant safety concern. Specifically, the inaccurate files could result in EQ equipment not being refurbished or replaced as required. In addition, the failure to replace or refurbish EQ equipment installed beyond its designated life could result in equipment failure during normal operation or post-accident conditions. The inspectors utilized IMC 0609, Attachment 0609.04, "Initial Characterization of Findings," and determined this issue was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions," was answered "No." The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, Evaluation area because the licensee had not thoroughly evaluated CAP 1431268 to ensure that the resolution addressed the causes and extent of condition commensurate with the safety significance.
Inspection Report# : 2015001 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO DETERMINE COMPENSATORY MEASURES.
A finding of very low safety significance with two examples and an associated non-cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the licensee's failure to accomplish the requirements of procedure FP-OP-OL-01, "Operability/Functionality Determination," Revision 14. Specifically, on two occasions, the licensee failed to determine compensatory measures following the identification of a Updated Safety Analysis Report (USAR) non-conforming condition associated with the Units 1 and 2 residual heat removal (RHR) recirculation sump valves on August 31, 2015, and for a degraded condition of the Unit 1 'B' RHR recirculation sump valves on September 14,

2015. The licensee entered the issues into the Corrective Action Program (CAP) as CAPs 01491302 and 01491900.

The inspectors determined that the licensee's failure to accomplish the requirements of procedure FP-OP-OL-01, "Operability/Functionality Determination," Revision 14, to properly determine compensatory measures for operable but degraded and operable but non-conforming conditions was a performance deficiency. The performance deficiency, with two examples, 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 equipment 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 on two occasions to properly determine compensatory measures to maintain or enhance operability of Technical Specification (TS) Systems, Structures, and Components (SSCs) that were not fully qualified until final corrective actions were taken. The inspectors applied IMC 0609, Attachment 4, "Initial Characterization of Findings," to this finding. The inspectors answered "No" to all questions within Table 3, "SDP Appendix Router," and transitioned to IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Per Exhibit 2, "Mitigating Systems Screening Questions," the inspectors 3 determined that because the finding was a qualification deficiency and did not impact operability of the TS SSCs, 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 for the performance deficiency was associated with the cross-cutting aspect of Consistent Process in the Human Performance cross-cutting area, involving individuals using a consistent, systematic approach to make decisions. Specifically, the licensee did not apply a consistent, systematic approach for determining the appropriateness of compensatory measures while making operability decisions for the degraded and non-conforming conditions associated with the RHR recirculation sump valves.
Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 04, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
4160 Vac Switchgear Preventive Maintenance Procedure Failed to Provide Adequate Resistance Values and Acceptance Criteria (Section 1R21.3.b(1))
Green. The team identified a finding of very low safety significance, and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to have an acceptance criteria for electrical contact resistance values in preventive maintenance procedures for 4160 Vac switchgear. Specifically, the licensee's preventive maintenance Procedure PE 0009, "4kV Switchgear Preventive Maintenance," failed to provide adequate resistance values and acceptance criteria for electrical connections at bus bar connection points and between 4kV switchgear cubicles. The licensee entered this finding into their Corrective Action Program (CAP) with a recommended action to add acceptance criteria into Table 1 of procedure PE 0009.
The performance deficiency was determined to be more than minor because it was associated with the procedural quality attribute of the Mitigating Systems cornerstone, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a design or qualification deficiency that did not represent a loss of operability or functionality. Specifically, the licensee determined the 4160 Vac switchgear cubicles were operable using guidance from Electric Power Research Institute Technical Report 1013457. The finding had a cross-cutting aspect associated with resources in the area of human performance. Specifically, the licensee management failed to ensure procedures are available to support successful work performance. [H.1] (Section 1R21.3.b(1))

Inspection Report# : 2015007 *(pdf)*

Significance: G Sep 04, 2015

Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Calculations for Motor-Operated Valve Thermal Overload Relays (Section 1R21.3.b(2))
Green. The team identified a finding of very low safety significance, and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to assure the safety-related thermal overload relay heaters were properly sized. Specifically, the licensee failed to consider the effects of the higher acceptable stroke time limits specified in motor operated valve Surveillance Test Procedure SP 1137, "Recirculation Mode Valve Functional Test," in safety-related thermal overload sizing calculation H6.1, "Motor Operated Valve Thermal Overload Heater Sizing for General Electric Motor Control Centers," Rev. 5. The licensee entered this finding into their CAP, and has actions in-place to stroke motor-operated valves to prevent a thermal overload relay trip.
The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. The finding screened as very low safety significance because the finding was a design deficiency confirmed not to result in a loss of safety function of a system or a train. Specifically, the licensee performed preliminary calculations and determined the thermal overload relays were operable. The team did not identify a cross-cutting aspect associated with this finding because it was confirmed not to be reflective of current performance due to the age of the performance deficiency. (Section 1R21.3.b(2))

Inspection Report# : 2015007 *(pdf)*

Significance: G Sep 04, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Replacement Containment Fan Cooling Unit Component Not Designed in Accordance with ASME Section III (Section 1R21.5.b(1))
Green. The team identified a finding of very low safety significance, and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to design all components of the replacement Containment Fan Coil Units in accordance with Section III of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. Specifically, the licensee failed to use Section III design rules to evaluate the Containment Fan Coil Unit header box as specified in the replacement Containment Fan Coil Unit design specification. The licensee entered this finding into their CAP with a recommended action to perform a condition evaluation for the new Containment Fan Coil Units to be installed in the upcoming refueling outage to ensure proper design code alignment with the design specification and the design report.
The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a design or qualification deficiency that did not represent a loss of operability or functionality. Specifically, the licensee's use of design rules from American Society of Mechanical Engineers, Section VIII, provided reasonable assurance for the Containment Fan Coil Unit header box pressure boundary integrity. The team did not identify a cross-cutting aspect associated with this finding because it was confirmed not to be reflective of current performance due to the age of the performance deficiency. (Section 1R21.5.b(1))

Inspection Report# : 2015007 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation

Failure to Implement Winter Plant Operation Procedure
The inspectors identified a finding of very low safety significance and a NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” on December 4, 2014, due to the licensee’s failure to follow procedure during the performance of TP 1637, “Winter Plant Operation.” Specifically, maintenance personnel failed to comply with a step within TP 1637 which directed that a tent and heater be installed around the Unit 2 cooling water (CL) discharge to grade header to prevent ice buildup and subsequent blockage during freezing conditions. Corrective actions for this issue included removing the ice buildup on the cooling water discharge header, installing a tent and heater in accordance with TP 1637, revising the associated procedures and performing an apparent cause evaluation.

The inspectors determined that this issue impacted the Mitigating Systems cornerstone and was more than minor because if left uncorrected, this issue could become a more significant safety concern. Specifically, with freezing conditions present coupled with the existence of leakage and resultant ice buildup on 20-CL-61, the potential existed for subsequent ice blockage and resultant inoperability of the cooling water system. This issue was of very low safety significance 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 associated with a conservative bias cross cutting aspect in the human performance cross cutting area. Specifically, operations and maintenance personnel did not utilize prudent decision making practices to ensure the cooling water header was adequately protected against freezing conditions.

Inspection Report# : 2014005 *(pdf)*

Barrier Integrity

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO PERFORM IMMEDIATE OPERABILITY DETERMINATION FOR 14 CFCU AS REQUIRED BY PROCEDURE.
An inspector identified finding of very low safety significance and a NCV of
10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," occurred on January 27, 2015, due to operations personnel failing to follow Procedure
FP–OP–OL–01, “Operability/Functionality Determination,” while assessing the operability of the 14 containment fan coil unit (CFCU) and the Unit 1 containment. Specifically, personnel failed to perform an immediate operability determination for the 14 CFCU and the Unit 1 containment after the inspectors identified that the 14 CFCU was potentially leaking. Corrective actions for this issue included documenting the immediate operability determination after the inspectors brought this issue to the attention of the operations department and sharing the details of this event with other operations personnel.

The inspectors determined that the failure to perform an immediate operability determination on the 14 CFCU and the Unit 1 containment as required by Step 5.3.1 of Procedure FP–OP–OL–01 was more than minor because if left uncorrected, the failure to perform operability determinations, as required by procedure could result in incorrect/untimely operability conclusions and the failure to take action to correct degraded or deficient conditions, as required by the technical specifications (TS). In addition, this is the second example of an untimely CFCU operability determination identified by the inspectors in the last ten months. The inspectors utilized IMC 0609, Attachment 0609.04, “Initial Characterization of Findings,” and determined that this issue was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 3, “Barrier Integrity Screening Questions,” Part B,

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 communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained.

Inspection Report# : 2015001 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO MAKE AN 8-HOUR REPORT REQUIRED BY 10 CFR 50.72(b)(3)(ii)(B).
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 August 8, 2014, to report an unanalyzed condition within eight hours of discovery. Specifically, the lack of fuse protection for the emergency bearing oil pump control circuitry created an unanalyzed condition due to the potential for a fire that impacted the licensee’s safe shutdown capabilities.

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 Severity Level 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

licensee identified the technical issue as part of their NFPA-805 transition process, and no additional or separate NRC-identified or self-revealed more-than-minor Reactor Oversight Process findings were noted, there was no cross-cutting aspect associated with this violation.
Inspection Report# : 2015002 *(pdf)*

Last modified : December 15, 2015