Prairie Island 2
1Q/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)*

Significance: G Jun 27, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO UPDATE THE UFSAR FOR PRESSURE ISOLATION VALVES.
The inspectors identified a Severity Level IV NCV of Title 10 CFR 50.71(e), "Periodic Update of the Final Safety Analysis Report," and an associated Green finding for the licensee's failure to update the Updated Safety Analysis Report (USAR) with a complete list of pressure isolation valves (PIVs) and periodic acceptance test requirements that had been reported to the Commission. Specifically, the licensee did not update Prairie Island Updated Safety Analysis (USAR) Section 4.6.1.2.1 "Pressure Isolation Valves" to include all PIVs and their associated test requirements. The licensee entered this issue into the CAP and initiated actions to change the USAR to incorporate the complete list of PIVs.
The inspectors determined that the licensee's failure to update the USAR with a complete list of PIVs and periodic acceptance test requirements and report the update to the Commission was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected the performance deficiency would

have the potential to lead to a more significant safety concern. Additionally, the failure to include all PIVs in the USAR was more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors utilized IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," and IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," and determined that the finding screened as very low safety significance (Green) since the inspectors answered "No" to the Loss Coolant Accident of Initiators questions in Exhibit 1, Section A, "Initiating Events Screening Questions." In accordance with Section 6.1.d.3 of the NRC Enforcement Policy, this violation was also categorized as Severity Level IV because the licensee's failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures. 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 Human Performance, Documentation, and involving the organization creating and maintaining complete, accurate, and up-to-date documentation.

Inspection Report# : 2014007 *(pdf)*

Mitigating Systems

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)*

Significance: G Sep 30, 2014
Identified By: NRC

Item Type: NCV Non-Cited Violation
FAILURE TO PERFORM OPERABILITY DETERMINATION 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 August 31, 2014, due to the failure to follow Procedure FP–OP–OL–01, “Operability Determinations,” while assessing the operability of three safety-related Agastat relays with unknown manufacturing dates. Specifically, licensee personnel failed to provide an adequate basis for concluding that there was a reasonable expectation that the relays would continue to perform their safety function(s). Corrective actions for this issue included changing out two of the relays and performing a technically adequate operability determination that complied with procedural requirements for the third relay.
This deficiency was more than minor because if left uncorrected, the failure to perform operability determinations/recommendations in accordance with procedural requirements could result in incorrect conclusions and the failure to take action to correct degraded or deficient conditions. 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 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 communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained (H.4).

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 27, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
INADEQUATE PROCEDURE FOR IDENTIFICATION OF SIGNIFICANT CONDITIONS ADVERSE TO QUALITY.
The inspectors identified a finding of very low safety significance and non-cited violation of Title 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” for the licensee’s failure to prescribe a procedure appropriate to the circumstances with respect to the identification of a significant condition adverse to quality (SCAQ). Specifically, FP–PA–ARP–01, “CAP Action Request Process,” provided an overly restrictive definition of what constituted a SCAQ. Consequently, the licensee staff did not identify a failed residual heat removal (RHR) pump shaft as a SCAQ. The licensee entered this issue into the CAP and initiated actions to establish compensatory measures for screening action requests (ARs) until this issue was corrected.
The inspectors determined that the licensee’s failure prescribe a procedure appropriate to the circumstances under FP–PA–ARP–01 was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with
IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Although, this issue could potentially affect each
of the Reactor Safety Cornerstones, the inspectors elected to evaluate this issue under the Mitigating Systems Cornerstone because of the actual example identified associated with the failed Unit 2 RHR pump shaft. The inspectors utilized IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,”
and IMC 0609, Appendix A, “The Significance Determination Process for Findings
At-Power,” and determined that the finding screened as very low safety significance (Green) since the inspectors answered “No” to each of the questions in Exhibit 2, Section A, “Mitigating Systems Screening Questions.” 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 Problem Identification and Resolution, Self-Assessment, and involving the organization routinely conducting self-critical and objective assessments of its programs and practices. Specifically, the failure to identify the overly restrictive definition of SCAQ during previous

audits of the CAP was caused by an insufficiently self-critical audit focus.
Inspection Report# : 2014007 *(pdf)*

Significance: G Jun 27, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO EVALUATE PAST OPERABILITY AND REPORTABILITY OF THE COOLING WATER SYSTEM.
The inspectors identified a finding of very low safety significance and non-cited violation of Title 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” for the licensee’s failure to accomplish FP–PA–ARP–01, “CAP Action Request Process,” to notify the shift manager of an operability/reportability concern and initiate a CAP for past periods of plant operation with a cooling water (CL) system strainer isolated. Specifically, with a CL header strainer isolated, a seismic event could lead to operation of the remaining CL strainer with excessive flow (e.g., outside analyzed limits) and adversely affect safety-related components cooled by the CL system. The licensee entered this issue into the CAP and initiated actions to evaluate past periods of operation with isolated CL strainers. The inspectors determined that the licensee’s failure to accomplish procedure FP–PA–ARP–01 was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Additionally, the performance deficiency was also determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of design control and adversely affected the Cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events. The inspectors utilized IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” and IMC 0609, Appendix A, “The Significance Determination Process For Findings At-Power.” The inspectors answered “Yes” to Question 2 of Section A of Exhibit 2, “Mitigating Systems Screening Questions,” since the CL system may not have been able to perform its design cooling functions during past periods of operation with one CL header strainer isolated. Therefore, the finding required a detailed risk evaluation which had been previously completed by a Senior Reactor Analyst (SRA) for the original finding (NCV 05000282/2013007–02; 05000306/2013007–02). Specifically, the SRA had previously determined that the bounding core damage frequency for this issue was 1.9E–7/yr. and concluded the total risk increase to the plant due to this finding was of very low risk 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 Human Performance, Consistent Process, and involving individuals using a consistent, systematic approach to make decisions. Specifically, the licensee failed to use the CAP process, in evaluation of the past operability and reportability of the CL system with the CL system strainers isolated.

Inspection Report# : 2014007 *(pdf)*

Significance: G May 02, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
No Compensatory Measure were Established for Lack of Fuses Coordination Associated with Safe Shutdown Power Supplies.
The inspectors identified a finding of very low safety significance and associated NCV of the Prairie Island Nuclear Generating Plant Facility Operating License Condition 2.C.(4) for the licensee’s failure to implement the requirements as specified in the Fire Protection Program (FPP) for impaired safe shutdown equipment. Specifically, the licensee failed to establish appropriate compensatory measures when they identified lack of coordination between DC panel fuses and upstream panels supply fuse under fault conditions for several safe shutdown power supplies. The licensee replaced all miss-coordinated fuses and entered the issue into their Corrective Action Program.

The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors (Fire) and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to fire events prevent undesirable consequences (i.e., core damage). Specifically, the failure to establish compensatory measures for lack of fuse coordination degraded the defense and depth element of the Fire Protection Program. The finding represented a low degradation and therefore the inspectors determined that the finding screened as having very low safety significance (Green) in Task 1.3.1 of IMC 0609, Appendix F. The inspectors determined that the finding had a cross-cutting aspect in the area of Human Performance, Procedure Adherence for the licensee's failure to follow instructions as specified in Procedure FP E-CAL-01 "Calculations."

Inspection Report# : 2014008 *(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)*

Significance: G Jun 30, 2014
Identified By: NRC

Item Type: NCV Non-Cited Violation
FAILURE TO IDENTIFY 23 FCU LEAK AS A CONDITION ADVERSE TO QUALITY.
The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," on May 18, 2014, due to the licensee's failure to promptly identify a leak on the 23 containment fan coil unit's lower northeast face as a condition adverse to quality. Corrective actions for this issue included declaring the fan coil unit and the Unit 2 containment inoperable, repairing the leak, performing an extent of condition review, and returning all inoperable equipment to service.
The inspectors determined that this issue was more than minor because it was associated with the structure, system and components and the barrier performance attributes of the Barrier Integrity cornerstone. The finding also impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases cause by accidents or events. The inspectors initially assessed the risk of this finding using IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." Since Question B.1 in Exhibit 3 was answered "Yes," a Region III Senior Reactor Analyst (SRA) continued the risk assessment using IMC 0609, Appendix H, and "Containment Integrity Significance Determination Process." Using Figure 6.1 of IMC 0609, Appendix H, the SRA determined that this finding was a Type B finding and potentially important to large early release frequency. The SRA performed a Phase 2 SDP evaluation and determined that this finding was of very low safety significance because the as-found containment fan coil unit leakage was less than 100 percent of the containment volume/day. The inspectors determined that this finding was cross cutting in the Human Performance, Avoid Complacency area because individuals failed to recognize and plan for the possibility of latent issues even while expecting successful outcomes (H.12).

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO IDENTIFY 21 FCU SPACER ALIGNMENT OFFSET AS A CONDITION ADVERSE TO QUALITY.
The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," on May 20, 2014, due to the licensee's failure to promptly identify a spacer alignment offset on the 21 containment fan coil unit's lower north outlet piping as a condition adverse to quality. As a result, the 21 fan coil unit was subsequently declared inoperable. Corrective actions included establishing acceptance criteria for spacer alignment dimensions, re-aligning the 21 containment fan coil unit lower north outlet flange spacer within the acceptance range, and revising the fan coil maintenance and inspection procedures to incorporate the newly established acceptance criteria.
The inspectors determined that this issue was more than minor because it was associated with the structures, systems and components and the barrier performance attributes of the Barrier Integrity cornerstone. The finding also impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance because Questions B.1 and B.2 provided in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," were answered "No." Specifically, the spacer alignment offset which rendered the 21 FCU inoperable did not represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors concluded that this finding was cross cutting in the Human Performance, Documentation area because the WO used during the spacer alignment check did not include acceptance criteria to determine whether the spacer was properly aligned (H.7).

Inspection Report# : 2014003 *(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: G Jun 27, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO IMPLEMENT THE CAP ACTION REQUEST PROCESS PROCEDURE.
The inspectors identified a finding of very low safety significance and non-cited violation of Title 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” for the licensee’s failure to accomplish FP–PA–ARP–01, “CAP Action Request Process.” Specifically, the inspectors identified three recent instances where additional questioning by NRC inspectors was required prior to CAP ARs being generated for conditions adverse to quality. As a result, conditions that rendered the 23 Fan Coil Unit (FCU) and the 13 FCU inlet Motor Operated Valve (MOV) inoperable, and identification of additional boric acid deposits on the 21 Reactor Coolant Pump (RCP) support structure, were not evaluated in a timely and effective manner. The licensee entered each of these instances into the CAP individually and collectively to determine the necessary actions to ensure identified conditions adverse to quality are entered into the CAP.
The inspectors determined that the failure to properly accomplish FP–PA–ARP–01 was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” because, if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Because all three instances discussed above qualitatively impacted the containment system, the finding is associated with the Barrier Integrity Cornerstone. The inspectors utilized IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” and concluded that this finding’s significance was best characterized by using Appendix M of IMC 0609, “Significance Determination Process Using Qualitative Criteria.” Based upon the fact that the three instances discussed above did not rise to a level of greater than very low safety significance, the inspectors determined that this

issue was best characterized as having 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 Problem Identification and Resolution, and involving the organization implementing a CAP with a low threshold for identifying issues. Specifically, the licensee did not implement the corrective action program at an appropriate threshold for identifying issues to ensure that conditions adverse to quality were addressed in a timely manner.
Inspection Report# : 2014007 *(pdf)*

Significance: G Jun 27, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO FOLLOW PROCEDURES FOR CANCELLING NON-CAP ACTION ASSIGNMENTS.
The inspectors identified a finding of very low safety significance and non-cited violation of Title 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings for the failure to accomplish Attachment 14, “CAP to External Process Interface,” of procedure FP–PA–ARP–01, “CAP Action Request Process.” Specifically, the inspectors identified three examples where severity level “C” CAP actions were closed to processes outside the CAP, and then subsequently cancelled without appropriate justification or documentation. The licensee entered this issue into the CAP and initiated actions to develop barriers within the CAP processes.
The inspectors determined that the licensee’s failure to accomplish procedure FP–PA–ARP–01 was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected it would have the potential to lead to a more significant safety concern. The inspectors utilized IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” and concluded that because the programmatic deficiency potentially affected all NRC cornerstones, the significance was best characterized by using IMC 0609, Appendix M “Significance Determination Process Using Qualitative Criteria.” Based upon the fact that the examples identified did not rise to a level of greater than very low safety significance, the inspectors determined that this issue was best characterized as having 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 Problem Identification and Resolution, and involving the organization taking effective corrective actions to address issues in a timely manner commensurate with their safety significance. Specifically, following the realization in April of 2013 of the potential flaws in the CAP processes to allow inappropriate cancellations of “C” severity level CAPs after being closed to the non-CAP PCR process, the station failed to correct the vulnerabilities that also existed for other non-CAP processes.
Inspection Report# : 2014007 *(pdf)*

Last modified : June 16, 2015