Prairie Island 1
2Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO DISPOSITION A RELEVANT SNUBBER INDICATION IN ACCORNANCE WITH THE ASME CODE.
The inspectors identified a finding of very low safety significance and a NCV of 10 CFR50.55a(g)(4) on November 13, 2012, due to the licensee's failure to disposition a relevant indication on a common steam generator snubber reservoir in accordance with the American Society of Mechanical Engineers (ASME) OM4 Code. Specifically, the licensee did not properly evaluate and disposition a condition where the hydraulic fluid level for a common reservoir serving snubbers H1 through H4 on the 12 steam generator was below the minimum required. The licensee issued a work order to fill the reservoir and documented the failure to properly disposition the indication in the corrective action program.
The inspectors determined that this finding was more than minor because if left uncorrected, the failure to properly disposition relevant indications could become a more significant safety concern. Absent NRC identification of this issue, the licensee would not have re-established the required fluid level in the reservoir for an indefinite period. This finding was determined to be of very low safety significance because a subsequent evaluation demonstrated that the low fluid level did not result in the piping system becoming inoperable. This issue was determined to be cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee failed to thoroughly evaluate problems such that the resolutions addressed the cause and extent of condition, as necessary (P.1 (c)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: FIN Finding
INADEQUATE EVALUATION OF OPERATING CREW DURING ANNUAL REQUALIFICATION EXAMINATION.
The inspectors identified a finding of very low safety significance on October 6, 2012, due to the failure to properly evaluate an operating crew's annual requalification examination performance in accordance with Procedure FP T SAT 73, "Licensed Operator Requalification Program Examinations." Specifically, the evaluators did not adequately assess the communications competency area when evaluating the crew's overall performance. As a result, the crew's performance was rated as "satisfactory with remediation" rather than as "unsatisfactory." Corrective actions for this issue included providing remedial training to the crew and having the crew complete an additional evaluated scenario as part of their annual examination.
This issue was more than minor because if left uncorrected the failure to properly assess licensed operator performance had the potential to lead to a more significant safety concern. The inspectors determined that this issue could be evaluated using IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process." The inspectors determined that this finding was of very low safety significance because it was related to the licensee's administration of an annual requalification operating test as discussed in Section 03.05 of NRC Inspection

Procedure 71111.11, “Licensed Operator Requalification Program.” This issue was determined to be cross cutting in the Human Performance, Decision Making area because the licensee did not make conservative assumptions during decisions regarding how this crew of licensed operators was evaluated (H.1(b)).

Inspection Report# : 2012005 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
IMPROPER WORK INSTRUCTIONS RENDERED D1 EDG INOPERABLE.
A self-revealing finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instruction, Procedures, and Drawings” was identified on June 13, 2013, due to the failure to have drawings appropriate to the circumstances when performing maintenance on the D1 Diesel Generator Room Cooling Supply and Exhaust Fan Blade Pitch Controller. Specifically, Logic Diagram NF 40326 1, “Interlock Logic Diagram Diesel Generator Room Cooling Unit 1 and 2,” incorrectly indicated that the fan blade pitch position would change to the maximum flow position if the controller experienced a loss of signal condition. This incorrect information resulted in the D1 Diesel Generator being rendered inoperable for 30 minutes when the temperature transmitter was disconnected from the controller as part of the maintenance activity. The licensee subsequently restored the D1 diesel generator to service by reconnecting the transmitter to the controller.
The inspectors determined that this issue was more than minor because it was associated with the design control, configuration control and procedure quality attributes 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. 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 issue was cross cutting in the Problem Identification and Resolution, Operating Experience (OE) area because the licensee did not implement and institutionalize OE through changes to station processes, procedures, equipment, and training programs after experiencing a similar issue in 2012 (P.2(b)).

Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: VIO Violation
FAILURE TO MONITOR SSCs AS REQUIRED BY 10 CFR 50.65.
The inspectors identified a finding of very low safety significance (Green) and a violation of 10 CFR 50.65, due to the failure to demonstrate that the performance or condition of multiple SSCs was being effectively controlled through the performance of appropriate preventive maintenance. The licensee also failed to establish goals sufficient to provide reasonable assurance that two SSCs were capable of performing their intended safety function after their performance demonstrations became invalid. Specifically, more than 350 evaluations written between January 2012 and April 2013

to demonstrate whether the performance or condition of specific SSCs was being effectively controlled remained unapproved as of May 2013. In addition, the performance demonstration for one SSC was allowed to remained unvalid for approximately one year before designating the SSC as an (a)(1) system. Corrective actions for this issue

included approving the previous evaluations, establishing 50.65(a)(1) action plans when required, and establishing actions to improve the maintenance rule program.
This issue was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. 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 IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based upon the fact that none of the equipment issues discussed above rose 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 concluded that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee failed to take appropriate and timely corrective actions to address the issues identified in November 2011 (P.1(d)).

Inspection Report# : 2013003 *(pdf)*

Significance: G Apr 19, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Verify the Adequacy of Cooling Water System Design.
The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to correctly model the effects of the strainers and isolation valves in the cooling water flow calculations. Specifically, calculations did not account for the strainer backwash differential pressure setpoint and leakage of the ring header isolation valves. This finding was entered into the licensee's Corrective Action Program (CAP) to revise the affected calculations and evaluate the need for additional corrective actions.

The performance deficiency was determined to be 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 the cooling water system to respond to initiating events to prevent undesirable consequences. Specifically, the magnitude of the errors required the licensee to re perform the cooling water flow calculations to assure the system would be able to meet the flow demand. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality. Specifically, the licensee removed conservatisms from the calculations, added the maximum allowable strainer loss, and reasonably determined that the system remained operable. In addition, the licensee determined the isolation valves had not experienced gross leakage. The inspectors did not identify a cross-cutting aspect associated with this finding because it did not reflect current performance due to the age of the performance deficiency.
Inspection Report# : 2013007 *(pdf)*

Significance: G Apr 19, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Review the Suitability of the CL Strainers Under Post seismic Flow Conditions.
TThe inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to review the suitability of the cooling water strainers under post seismic flow conditions. Specifically, the licensee did not recognize the post-seismic hydraulic parameters were greater than the vendor design values for the strainers. This finding was entered into the licensee's CAP to evaluate the condition and initiate further actions as necessary.

The performance deficiency was determined to be 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 the cooling water system to respond to initiating events to prevent undesirable consequences. Specifically, flow rates higher than design values may impair the cleaning function and cause damage to the strainers affecting the capability of the cooling water system to perform its accident mitigating function. The finding screened as of very low safety significance (Green) because a detailed risk evaluation determined the core damage frequency of this finding was 1.9E 7/yr. The inspectors did not identify a cross-cutting aspect associated with this finding because it did not reflect current performance due to the age of the performance deficiency.

Inspection Report# : 2013007 *(pdf)*

Significance: G Apr 19, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Demonstrate the Ability to Transfer Diesel Fuel Oil Between Unit 1 Fuel Oil Tanks.
The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” for the failure to demonstrate the ability to transfer diesel fuel oil from any Unit 1 fuel oil storage tank to any Unit 1 emergency diesel generator or diesel driven cooling water pump day tank. Specifically, the licensee did not intentionally or periodically verify the ability to transfer fuel between the Unit 1 tanks as credited in the Technical Specification Basis and Updated Safety Analysis Report. This finding was entered into the licensee’s CAP to test the affected flow paths.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of the Unit 1 emergency diesel generators and diesel drivel cooling water pumps to respond to initiating events to prevent undesirable consequences. Specifically, the failure to verify the fuel oil transfer capability did not ensure the minimum fuel oil volume required by Technical Specifications could be supplied to these systems to support their accident mitigating function. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality. Specifically, the licensee reviewed the recent history of the affected piping system and determined the affected flow paths were successfully used in 2010 and 2011 providing reasonable assurance the flow paths were available. The inspectors did not find an applicable cross-cutting aspect, which represented the underlying cause of this performance deficiency; therefore, no cross-cutting aspect was assigned.

Inspection Report# : 2013007 *(pdf)*

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECT CONDITION ADVERSE TO QUALITY FOR VALVE SI-6-4.
The inspectors identified a finding of very low safety significance and an non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Actions,” on December 29, 2012, due to the failure to correct a condition adverse to quality. Specifically, the licensee failed to correct safety injection (SI) accumulator check valve SI 6 4 after the valve failed surveillance testing. Corrective actions for this issue included performing an operability evaluation which determined that SI 6 4 was operable but nonconforming, scheduling the testing of SI 6 4 for the next refueling outage, and performing an extent of condition review.
The inspectors determined that that this issue was more than minor because if left uncorrected the failure to correct conditions adverse to quality could become a more significant safety concern due to safety-related equipment issues being unresolved. 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 issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not thoroughly evaluate the problems with SI 6 4 to ensure that the resolution addressed the cause P.1(c).

Inspection Report# : 2013002 *(pdf)*

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE WORK INSTRUCTIONS FOR FOREIGN MATERIAL REMOVAL FROM D2 EDG AIR START PIPING.
The inspectors identified finding of very low safety significance and an non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” on January 28, 2013, due to the failure to have instructions appropriate to the circumstance to address the presence of foreign material in the new D2 emergency diesel generator (EDG) air start piping assembly. This resulted in the D2 EDG failing to start during monthly surveillance testing. Corrective actions for this issue included removing the foreign material from the piping assembly and inspecting the remaining
D1 and D2 EDG air start piping assemblies for cleanliness.
The inspectors determined that this issue was more than minor because if left uncorrected, the presence of foreign material in safety-related components could lead to a more significant safety concern. Specifically, foreign material could migrate into various areas and render safety-related equipment inoperable. The inspectors 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” due to the ability to start the D2 EDG using the remaining air start “train” and the lack of foreign material in this portion of the D2 EDG starting air system. The inspectors determined that this issue was cross cutting in the Problem Identification and Resolution, Operating Experience area because the licensee had not institutionalized the operating experience regarding solenoid valve sticking due to foreign material through changes to station processes, procedures, equipment and training programs P.2(b).
Inspection Report# : 2013002 *(pdf)*

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECT CONDITION ADVERSE TO QUALITY ON THE D1 EDG.
The inspectors identified a finding of very low safety significance and an non-citied violation of 10 CFR Part 50, Appendix B, Criterion XVI, on August 14, 2012, due to the licensee’s failure to identify and correct a condition adverse to quality. Specifically, the licensee failed to identify and correct a condition of thick smoke resulting from an exhaust manifold oil leak on the D1 EDG; this condition had existed since April 13, 2012. This issue led to an unplanned shutdown of the Unit 1 reactor due to the discovery of a similar condition on the D2 EDG. Corrective actions included completing an equipment cause evaluation and replacing the EDG exhaust manifold gaskets and bolting.
The inspectors determined the finding was more than minor because, if left uncorrected, the failure to promptly identify and correct conditions adverse to quality could become a more significant safety concern. Specifically, the failure to identify and correct emergency diesel generator oil leaks could lead to a fire hazard and the unavailability of safety-related equipment. A Senior Reactor Analyst determined that this finding was of very low safety significance because the overall change in core damage frequency due

to this issue was 3.3E-7/yr. The inspectors determined the finding was cross-cutting in the Problem Identification and Resolution, Operating Experience area because of the licensee’s failure to implement and institutionalize operating

experience through changes to station processes, procedures, equipment, and training programs P.2(b).
Inspection Report# : 2013002 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE OF SEASONAL READINESS PROCEDURE TO IDENTIFY OPERABILITY ISSUES.
The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on June 26, 2012, due to the licensee's failure to have procedures appropriate to the circumstance for coordinating and preparing for the onset of hot weather conditions. Specifically, Procedure FP WM SR 01, "Seasonal Readiness Program," Attachment 2, failed to include criteria to ensure that issues associated with the ability of the Unit 1 EDGs to operate when outside air temperatures exceeded 97 degrees Fahrenheit were identified and addressed prior to the onset of hot weather. This resulted in both Unit 1 EDGs being rendered inoperable, and the D1 EDG being rendered unavailable, on July 2, 2012.
The inspectors determined that this issue was more than minor it impacted the protection against external events objective of the Mitigating Systems Cornerstone. In addition, this finding impacted the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this issue was of very low safety significance because each of the questions listed in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," could be answered "no." This finding was cross cutting in the Human Performance, Work Control area because Procedure FP WM SR 01 was not written to ensure that activities needed to support long term equipment reliability and availability were planned such that they were performed in a preventative manner rather than in a reactive manner (H.3(b)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO DEMONSTRATE PERFORMANCE OR CONDITION OF RADIATION MONITORS WERE EFFECTIVELY CONTROLLED THROUGH THE PERFOMANCE OF MAINTENANCE.
A finding of very low safety significance and an NCV of 10 CFR 50.65 was identified by the inspectors on August 22, 2012, due to the licensee's failure to demonstrate that the performance or condition of the radiation monitoring system was being effectively controlled through the performance of appropriate preventive maintenance such that the structure, system or component (SSC) remained capable of performing its intended function. Specifically, the licensee failed to perform maintenance rule evaluations following the failure of multiple radiation monitors in July 2010. Since the evaluations were not completed, the licensee was unable to demonstrate that the performance of the radiation monitors was being effectively controlled through the performance of maintenance. Corrective actions for this issue included performing the evaluations and comparing the results to pre-established performance monitoring criteria.
The inspectors determined that this finding was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone and impacted the cornerstone's objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. This finding also impacted the SSC and barrier performance attributes of the Barrier Integrity Cornerstone by affecting the reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents and events. The inspectors determined that this issue was of very low safety significance because each of the questions listed in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," could be answered "no." The inspectors determined that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee failed to thoroughly evaluate this problem such that the resolution addressed the cause and extent of condition as necessary (P.1(c)).

Inspection Report# : 2012005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: W Dec 18, 2012
Identified By: NRC
Item Type: VIO Violation
Emergency Preparedness Degraded Emergency Action Level Scheme
Title 10 of the Code of Federal Regulations (10 CFR) 50.54(q)(2) requires that a holder of a nuclear power reactor operating license follow and maintain the effectiveness of an emergency plan that meets the requirements in Part 50, Appendix E and the planning standards of 10 CFR 50.47(b).
10 CFR 50.47(b)(4) states "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures."
10 CFR 50.47(b)(8) states "Adequate emergency facilities and equipment to support the emergency response are provided and maintained."
Contrary to the above, from July 24, 2011, until May 18, 2012, Prairie Island Nuclear Generating Plant (PINGP) Unit 1 failed to follow and maintain in effect an emergency plan that uses a standard emergency classification and action level scheme because adequate emergency equipment to support the emergency response was not maintained. Specifically, PINGP Unit 1 did not take timely corrective actions to restore the failed 1R-50 Shield Building High Range Vent Gas Radiation Detector instrument and did not implement a compensatory measure which addressed the parameters identified in emergency action levels RG1.1, General Emergency, and RS1.1, Site Area Emergency.

Inspection Report# : 2012504 *(pdf)*
Inspection Report# : 2013503 *(pdf)*

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

Last modified : September 03, 2013