

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in

spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).] Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).] Inspection Report# : [1999007\(pdf\)](#)



Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002] Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation. Inspection Report# : [2001014\(pdf\)](#)



Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)

G

Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2

containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

Barrier Integrity



Significance: G Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety



Significance: G Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-slucing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response

band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

Miscellaneous

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance,

misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12

and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Last modified : April 01, 2002

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve

opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).
Inspection Report# : [2000005\(pdf\)](#)

G

Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)

G

Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)

G

Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process

failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the

improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]
Inspection Report# : [2000016\(pdf\)](#)

Barrier Integrity



Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.
Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sludging radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sludging evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01].]

Inspection Report# : [1999010\(pdf\)](#)G**Significance:** Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

Miscellaneous

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)**Significance:** N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to

cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: G Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16

instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Last modified : April 01, 2002

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve

opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).
Inspection Report# : [2000005\(pdf\)](#)



Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)



Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service

water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: G Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impactd on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not wthin the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: G Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: G Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control

room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

G

Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sludging radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sludging evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure

implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G

Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01].]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)**Significance:** N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band.

Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified

by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability

to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 29, 2002

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

W

Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: G May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately 1.18E-8) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control

room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

G

Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure

implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G

Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)**Significance:** N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: G Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: G Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue

will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 28, 2002

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)



Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band

since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)



Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]
Inspection Report# : [1999015\(pdf\)](#)

G

Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.
Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]
Inspection Report# : [1999014\(pdf\)](#)

G

Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

G

Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in

spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]
 Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity



Significance: G Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety



Significance: G Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)



Significance: G Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G

Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)**Significance: N/A** Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16

instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: G Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: G Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue

will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 28, 2002

Prairie Island 2

Initiating Events

Mitigating Systems

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: G May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt

Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: G Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)



Significance: W Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

G

Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control

room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

G

Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G

Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

G

Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01].]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take

effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and

the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: G Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: G Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the

issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 27, 2002

Prairie Island 2

Initiating Events

Mitigating Systems

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: G May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt

Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: G Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: G Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)



Significance: W Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

G

Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control

room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]
Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

G

Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

G

Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

G

Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety

G

Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G**Significance:** Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01].]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)**Significance:** N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take

effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and

the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: G Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: G Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the

issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 26, 2002

Prairie Island 2

Initiating Events

Mitigating Systems

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)

G

Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)

G

Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)

G

Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01 (DRP).]

Inspection Report# : [2001002\(pdf\)](#)

**Significance:** Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002]

Inspection Report# : [2000013\(pdf\)](#)**Significance:** Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)**Significance:** N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)**Significance:** Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)**Significance:** Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

G

Significance: Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)

G

Significance: Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment

pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impactd on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not wthin the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)

G

Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

G

Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

G

Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety



Significance: Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did not direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety

G**Significance:** Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

G**Significance:** Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)G**Significance:** Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The

inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Significance: Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC

exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : March 01, 2002

Prairie Island 2

Initiating Events

Mitigating Systems



Significance: Feb 01, 2002

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002] In April 2002, the NRC completed a second supplemental inspection [IR 2002-03] of the licensee's revised root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee had appropriately identified root causes associated with the finding and had proposed or implemented corrective actions to preclude recurrence. Therefore, the WHITE performance issue was closed. [Updated 07/08/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator

(EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately $1.18E-8$) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01(DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related

backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]
Inspection Report#: [2000016\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report#: [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report#: [2000008\(pdf\)](#)

G

Significance: Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report#: [2000008\(pdf\)](#)

G

Significance: May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report#: [2000005\(pdf\)](#)



Significance: G Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)



Significance: G Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impact on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)



Significance: G Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)



Significance: Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity



Significance: Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary.

[Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety



Significance: Feb 15, 2001

Identified By: NRC
Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety



Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to

respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection



Significance: Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of

detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not

timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01(DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)



Significance: Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)



Jul 20, 1999

Significance: Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : July 22, 2002

Prairie Island 2

Initiating Events

Mitigating Systems

Significance: W Sep 25, 2001

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002] In April 2002, the NRC completed a second supplemental inspection [IR 2002-03] of the licensee's revised root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee had appropriately identified root causes associated with the finding and had proposed or implemented corrective actions to preclude recurrence. Therefore, the WHITE performance issue was closed. [Updated 07/08/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13.

The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.
Inspection Report# : [2001014\(pdf\)](#)

Significance:  May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)

Significance:  Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)

Significance:  Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately 1.18E-8) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The

tracking number for this NCV is 50-306/01-02-01(DRP).]

Inspection Report# : [2001002\(pdf\)](#)

Significance:  Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)

Significance:  Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending

approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a

Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

Significance:  Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)

Significance:  Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal impactd on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)

Significance:  Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Significance:  Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

Significance:  Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

Significance:  Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Significance:  Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)



Significance: Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety



Significance: Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a

person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.
Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

Significance:  Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01].]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in

the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01 (DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL

HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Significance:  Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS).

Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : August 29, 2002

Prairie Island 2

Initiating Events

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: FIN Finding

INAPPROPRIATE MAINTENANCE RULE SAFETY SIGNIFICANCE CLASSIFICATION OF THE EXTERNAL CIRCULATING WATER INTAKE SCREEN BYPASS GATES

Inspection Report# : [2002008\(pdf\)](#)

Significance: TBD Sep 30, 2002

Identified By: NRC

Item Type: URI Unresolved item

MAINTENANCE RULE FUNCTIONAL FAILURE EVALUATION OF BYPASS GATE FAILURES

Inspection Report# : [2002008\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT DEFICIENCIES ADVERSE TO QUALITY INVOLVING POTENTIAL FLOW DIVERSION PATHS

Inspection Report# : [2002008\(pdf\)](#)

Significance:  Sep 25, 2001

Identified By: NRC

Item Type: VIO Violation

NON-SAFETY RELATED LUBRICATION WATER SOURCE RESULTING IN PUMP INOPERABILITY.

[Event date was changed so that this item would show up during this ROP year (2002). The original date was 12/4/2000] The original design and installation of the three safety related deep draft cooling water (service water) pumps failed to require safety related electrical power for the filter backwash system for the water source for bearing lubrication and cooling of the drive shaft bearings. During a loss of offsite electrical power, this could have resulted in the clogging of the filters after a short time and, with the loss of shaft bearing lubrication water, inoperable cooling pumps. In addition, a design change in 1977 inappropriately reclassified the safety related bearing lubricating water source for the pumps from safety related to non-safety related. This resulted in the installation of non-safety related bearing lubrication water sources for the safety related drive shaft bearings. Licensee personnel investigated the issue on November 1, 2000, and declared all three of the safety related cooling water pumps inoperable. In February 2001, the NRC discovered an error in the initial Phase 3 analysis of the issue which contributed to the issue being characterized as a YELLOW finding in the inspection report. Upon reevaluation of the Phase 3 analysis, the NRC determined that the issue was more appropriately characterized as a WHITE finding. The NRC documented the

reanalysis results in a letter to the licensee dated February 20, 2001. [Updated 09/25/2001] In June 2001, the NRC completed a supplemental inspection of the licensee's root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee's root cause evaluation did not identify all of the root causes and did not propose corrective actions to preclude recurrence. As a result, the WHITE performance issue could not be closed at that time. [Updated 02/12/2002] In April 2002, the NRC completed a second supplemental inspection [IR 2002-03] of the licensee's revised root cause evaluation and corrective actions for the WHITE finding. Results of the supplemental inspection indicated that the licensee had appropriately identified root causes associated with the finding and had proposed or implemented corrective actions to preclude recurrence. Therefore, the WHITE performance issue was closed. [Updated 07/08/2002]

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY ALL ROOT CAUSES FOR INOPERABLE COOLING WATER PUMPS

The inspectors determined that the licensee's evaluation of the White finding, involving an inoperability of the safeguards cooling water (service water) pumps due to the absence of a qualified source of lubricating water supply to the line shaft bearings, did not identify all of the root causes for the finding and did not propose corrective actions to preclude recurrence. Specifically, the evaluation did not identify root causes associated with inadequate staff and management knowledge of the cooling water pump design and did not identify process and procedure inadequacies which allowed the condition to continue for 25 years. As a result, the licensee did not propose corrective actions for these root causes. The White finding was initially documented in NRC Inspection Report 50-282/00-13; 50-306/00-13. The White inspection finding will remain open. The failure to identify all of the root causes for the White finding and to develop and implement corrective actions to prevent recurrence was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. As of the end of the inspection, the licensee had initiated a condition report (CR #2001-5343) to address this issue and the violation was being treated as a Non-Cited Violation.

Inspection Report# : [2001014\(pdf\)](#)

Significance:  May 23, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS REGARDING FUEL OIL AND LUBRICATING OIL INCOMPATIBILITY FOR THE D5 AND D6 EDGS RESULTING IN AN EXTENDED OUT-OF-SERVICE TIME TO REPAIR THE D6 EDG.

The inspectors identified a Violation (10 CFR, Part 50, Appendix B, Criterion XVI), in that, the licensee operating experience assessment process failed to critically evaluate or propose appropriate corrective measures for a condition adverse to quality identified in two industry and one NRC generic communications in 1996. As a result, the condition adverse to quality was self-revealed during periodic surveillance testing on April 9, 2000, and resulted in at least 206 hours of D6 Emergency Diesel Generator (EDG) unavailability during Unit 2 operation and possibly additional unavailability for both the D5 and D6 EDGs. The finding was of at least very low safety significance assuming that the D5 EDG was always available and the D6 EDG was only unavailable during the time period that it was taken out-of-service for repairs. However, both EDGs may have been unavailable for an extended period of time because they were in a degraded condition due to fuel oil and lubricating oil incompatibility. Based on a Regulatory Conference held on Tuesday, November 21, 2001, the NRC has concluded that the inspection finding is appropriately characterized as Green.

Inspection Report# : [2001013\(pdf\)](#)

Significance:  Feb 22, 2001

Identified By: NRC

Item Type: FIN Finding

COOLING WATER LINE WAS NOT ADEQUATELY PROTECTED FROM FREEZING.

The inspectors identified that ice blockage was forming in the cooling water emergency dump-to-grade line due to a

leaking isolation valve. The problem was discovered and resolved before the piping became substantially blocked, so no regulatory concerns were identified. The finding was of very low safety significance because the issue would have only been a problem in the extremely unlikely event that the line had become completely blocked by ice at the same time that both of the normal discharge lines were blocked due to a seismic or similar event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

RISK ASSESSMENT AND CONTROL ASSOCIATED WITH UNIT 1 BUS 15 OUTAGE.

The inspectors identified a non-cited violation of Section (a)(4) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in that the licensee failed to assess the risk associated with the performance of Work Order 0007629, "Transfer 480 Volt Safeguards Buses 111 and 112 to Alternate Source," which was later shown to cause an increase in the core damage frequency for Unit 2 because it caused the D5 diesel generator to be unavailable. This finding was of very low safety significance because, although the increase in risk rate was relatively high, the change in core damage probability was very low (approximately 1.18E-8) due to the short time that D5 was unavailable (1.55 hours) in comparison to the allowed outage time for this plant configuration (5.5 days). [The tracking number for this NCV is 50-306/01-02-01(DRP).]

Inspection Report# : [2001002\(pdf\)](#)



Significance: Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE AIR/VACUUM VALVES COULD RESULT IN FLOODING OF THE COOLING WATER PUMP AREA.

A potential failure of one of the air/vacuum valves associated with the cooling water pumps could have resulted in possible flooding in the area of the three safety related cooling water pumps. As a result the three safety related cooling water pumps would become inoperable. After reviewing this issue licensee personnel declared all three of the cooling water pumps to be inoperable. The issue was identified as a design violation of Criterion III of 10 CFR 50, Appendix B. Because of mitigating actions the two units continued to run.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Dec 04, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

MODIFICATION INCREASED THE POSSIBLE FAILURE RATE OF THE AUXILIARY FEEDWATER SYSTEM.

A design change did not consider the increased failure rate of the the auxiliary feedwater system due to the probability that the AFW pumps could trip on low suction pressure with the modification installed. The failure to determine the effect of a design change on system performance was a violation of Criterion III of 10 CFR Part 50, Appendix B.

Inspection Report# : [2000013\(pdf\)](#)



Significance: Nov 12, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY IMPLEMENT THE TEMPORARY PROCEDURE CHANGE PROCESS.

The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. The improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost. The finding was of very low safety significance because it only affected one train of the redundant

cooling water system and the condition only existed for a short period of time. (Section 1R23.1) [The tracking number for this NCV is 50-282/00-16-01(DRP); 50-306/00-16-01(DRP).]

Inspection Report# : [2000016\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

TWO EXAMPLES OF A PROCEDURE VIOLATION FOR STEAM GENERATOR MANWAY REPLACEMENT.

The licensee identified two occurrences of maintenance procedure implementation errors during steam generator manway cover installation, and poor scheduling of site-wide safety meetings which directly contributed to Unit 2 being kept in a condition of increased risk for an extended period of time. The delays resulted in the licensee spending approximately 14 additional hours at reduced inventory conditions with a time to boiling of about 25 minutes should decay heat removal capability have been lost. The maintenance procedure implementation errors were identified as two examples of a Non-Cited Violation. The inspectors determined that these issues were of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was very small during the 14-hour window and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for these NCVs is 50-306/2000008-01(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION WHILE INSTALLING NOZZLE DAMS ON THE 22 STEAM GENERATOR.

As discussed in Inspection Report 50-282/2000005(DRP); 50-306/2000005(DRP), the licensee identified that a maintenance error during the 22 steam generator nozzle dam installation led to the need to keep Unit 2 in a configuration of increased risk with reduced inventory for longer than it otherwise would have been. The issue was determined to be a Non-Cited Violation. The inspectors determined that this issue was of very low safety significance because the likelihood of an initiating event which would cause a loss of residual heat removal capability was small during the approximately 7 extra hours in reduced inventory and, even if it did occur, the licensee had adequate mitigation capability. [The tracking number for this NCV is 50-306/2000008-02(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  Jun 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR WORK PACKAGE TO MODIFY VENTILATION SYSTEM.

The inspectors identified a Non-Cited Violation for Unit 2 as a result of the licensee not following a procedure which required evaluating proposed work for impact on system and plant operation. The failure to perform this evaluation resulted in a temporary modification to a containment ventilation duct causing the failure of a draindown automatic self-limiting feature and the need for reactor operators to secure a reactor coolant system draining evolution when in reduced inventory conditions. The inspectors determined that this issue was of very low safety significance because the location where the drain line penetrated the reactor coolant system hot leg piping would have prevented the reactor coolant system inventory from decreasing to a point that would have impacted residual heat removal pump operability. [The tracking number for this NCV is 50-306/2000008-03(DRP).]

Inspection Report# : [2000008\(pdf\)](#)

Significance:  May 18, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

CABLE SEPARATION DISTANCES NOT MET IN UNIT 2 CONTAINMENT.

The licensee determined that electrical cables on redundant trains of pressurizer power operated relief valves and block valves in the Unit 2 containment were not separated by at least 20 feet as required by an exemption to 10 CFR Part 50, Appendix R. In the case of spurious valve opening due to hot shorts, reactor coolant system pressure control could have been lost and the ability to maintain natural circulation cooling following a fire in the containment could have been adversely affected. Using the Significance Determination Process of Inspection Manual Chapter 0609, Appendix F, NRC fire protection specialists determined that the issue was of very low risk significance and within the licensee control band since the probability of a credible fire scenario in the affected area of containment was very small due to the very low ignition probability and the small amount of intervening combustibles. This issue was determined to be a Non-Cited Violation (NCV) for failure to meet 10 CFR Part 50, Appendix R, requirements. The tracking number for this NCV is 50-306/2000005-02(DRP).

Inspection Report# : [2000005\(pdf\)](#)

Significance:  Nov 08, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION FOR HOT SHORT ISSUE WITH VALVES MV-32064 AND MV-32065.

GREEN. The inspectors identified that the corrective actions to address the hot short issue for the residual heat removal vessel injection valves was inadequate, which resulted in a noncited violation [(NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."] The modification did not address the potential for both a hot short and a ground that could allow a fire-induced spurious energization of the valves. This condition could have prevented the valves from performing their safety function. This issue was determined to be of low risk significance because the valves were still considered operable based on the compensatory measures in place to address a potential hot short event. [The tracking number for this NCV is 50-282/99015(DRS); 50-306/99015-01(DRS).]

Inspection Report# : [1999015\(pdf\)](#)

Significance:  Oct 13, 1999

Identified By: Licensee

Item Type: FIN Finding

CONTROL ROOM VENTILATION SYSTEM INOPERABLE DUE TO FAULTY DOOR LATCHES.

GREEN. On June 25, 1999, the licensee discovered that the door into the 122 control room chiller room was inoperable as a high-energy line break barrier because of broken latch pins. The pins were repaired within 1 hour of the discovery. On July 27, 1999, the licensee again discovered the same condition and repaired the latch pins within 1 hour. On August 12, 1999, the licensee determined that the latch pins on both the 121 and 122 control room chiller room doors, even when intact, may never have been able to perform their safety function because of inadequate material strength. As discussed in previous inspection reports, the NRC considered the issues to be potentially risk significant because of the possibility of a main steamline break introducing a steam environment into the control room and affecting multiple mitigation systems on both units simultaneously. Using Phase 3 of the Significance Determination Process, the NRC reviewed licensee-supplied calculations and determined that the issues were of very low risk significance because of a low initiating event frequency and a high-energy line break re-analysis that showed that compartment pressures would be lower than originally assumed. Therefore, the issues were determined to be within the licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 22, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.59 FOR MANUAL ACTIONS DURING LOSS OF INSTRUMENT AIR.

A noncited violation of 10 CFR 50.59 was identified during closeout of an unresolved item from the 1997 System Operational Performance Inspection. It was determined that prior NRC approval should have been sought for the modification requiring manual actions to connect a nitrogen bottle on loss of instrument air. This issue had minimal

impacted on safety because corrective actions were taken when the issue was originally identified. This issue involved 50.59 and therefore is not within the SDP. [The tracking number for this noncited violation is 50-282/99014-01(DRS); 50-306/99014-01(DRS).]

Inspection Report# : [1999014\(pdf\)](#)

Significance:  Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE VIOLATION FOR CONTROL ROOM CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that an inadequate review of the temporary procedure change regarding the installation of deadbolts on the 121 and 122 control room chiller room doors resulted in the approval and incorporation of the change into a procedure on July 30, 1999. The procedure change could have led to a violation of Technical Specifications or operability requirements and the false belief that the doors would perform their intended safety function of withstanding a high-energy line break. Reliance on the deadbolts for operability could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts prior to the use of the temporary procedure change to establish operability. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both Units, in the area of inadequate implementation of the licensee's temporary procedure change process. [The tracking number for this issue is 50-282/99007-02(DRP); 50-306/99007-02(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Significance:  Aug 31, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

DESIGN CONTROL VIOLATION FOR CHILLER ROOM DOOR DEADBOLT INSTALLATION.

GREEN. The inspectors identified that the licensee installed a substitute deadbolt locking mechanism on the 121 and 122 control room chiller room doors on July 30, 1999, as a permanent modification and without preparing a formal design or modification package or performing calculations to verify that the deadbolts were the functional equivalent to the installed door locking mechanisms. Following questions by the inspectors on what engineering basis existed to demonstrate functional equivalence of the door bolts analysis by the licensee revealed that the deadbolts, as installed, were inadequate to perform their intended function to withstand a high energy line break. Failure of the deadbolts could have resulted in the control room special ventilation system being unable to maintain a habitable environment in the control room, requiring a control room evacuation, and in spurious operation or disabling of mitigating system equipment. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process.] The finding was considered to be of low risk significance because the inspectors questioned the licensee's basis for the use of the deadbolts to establish operability of the doors prior to the need to do so. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified a non-cited violation (NCV), assigned to both units, in the area of design control. [The tracking number for this item is 50-282/99007-01(DRP); 50-306/99007-01(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Barrier Integrity

Significance:  Aug 31, 1999

Identified By: Licensee

Item Type: NCV NonCited Violation

ISOLATION OF CONTAINMENT PURGE FROM SPENT FUEL POOL VENTILATION SYSTEM NOT TESTED.

GREEN. The licensee had previously identified, as reported in Licensee Event Report 1-99-04, that surveillance testing of the spent fuel pool special ventilation system had been inadequate in that it did not verify that the containment inservice purge system would automatically isolate as required on high radiation from a fuel handling event in the spent fuel pool. Failure to isolate the system could have led to a radioactive material release to the environment in the case of a fuel handling event in the spent fuel pool. Later testing proved that the isolation function worked for Unit 1. The function had not yet been tested for Unit 2. [Using the Significance Determination Process,] the NRC determined that the finding was of low risk significance due to a low estimated initiating event frequency, high probability that the system will prove to be operable for Unit 2, and credit for manual actions, if necessary. [Therefore, this issue was determined to be within the licensee response band.] The inspectors identified an NCV, assigned to both units, regarding failure to meet the surveillance test requirements of Technical Specification 4.15. [The tracking number for this issue is 50-282/99007-05(DRP); 50-306/99007-05(DRP).]

Inspection Report# : [1999007\(pdf\)](#)

Emergency Preparedness

Significance: N/A Sep 15, 2000

Identified By: NRC

Item Type: FIN Finding

REHEARSED BIENNIAL EMERGENCY EXERCISE SCENARIO.

An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenarios compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise performance and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Inspection Report# : [2000011\(pdf\)](#)

Occupational Radiation Safety

Significance:  Feb 15, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE OF RADIATION BARRIER.

Radiation protection staff together with the NRC inspector identified that a radiation barrier failed when a radiation protection technician, providing job coverage, failed to immediately direct workers from an area of increasing radiation dose rates. The finding was of very low safety significance because the technician did direct the workers from the area after confirming the elevated dose rates and the delay did not cause significant unanticipated doses to the workers.

Inspection Report# : [2001003\(pdf\)](#)

Significance:  Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONDUCT PROCEDURALLY REQUIRED RADIATION SURVEY.

GREEN. On March 27, 2000, the licensee sluiced resin from the 21 evaporator feed ion exchanger, the 21 evaporator condensate ion exchanger, and the 11 evaporator ion exchanger to a low-level resin liner located in the spent resin decontamination pit. The post-sluicing radiation surveys of the spent resin decontamination pit were not begun until 3 hours after the completion of the evolution, after a licensee intern engineer questioned whether a survey had been performed. A survey was completed approximately 4 hours after the sluicing evolution was finished and revealed radiation exposure levels between 1000 and 1100 millirem per hour at 30 centimeters from the spent resin liner. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for improper procedure implementation. The tracking number for this NCV is 50-282/2000004-01(DRP); 50-306/2000004-01(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Significance:  Mar 27, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL ACCESS TO HIGH RADIATION AREA.

GREEN. On March 27, 2000, subsequent to a resin sluicing evolution, the licensee failed to properly control the access to the spent resin decontamination pit, which had become a high radiation area requiring locked or guarded doors, as a result of the sluicing operation. Access to this area remained unlocked and unguarded for approximately 20 hours after the survey results indicated that it had become a locked high radiation area until identified by the licensee. The inspectors performed a risk significance determination of this issue using the Occupational Radiation Safety Significance Determination Flowchart in accordance with draft NRC Inspection Manual 0609, "Significance Determination Process." Since no unintended personnel exposure occurred as a result and there was no substantial potential for overexposure to occur, this finding was considered to be of very low risk significance and within the licensee response band. The finding was assigned to both Unit 1 and Unit 2. This issue was determined to be a Non-Cited Violation (NCV) for the failure to control the access to a high radiation area as required by Technical Specifications. The tracking number for this NCV is 50-282/2000004-02(DRP); 50-306/2000004-02(DRP).

Inspection Report# : [2000004\(pdf\)](#)

Public Radiation Safety

Significance:  Aug 20, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT TELEPHONE NUMBER ON SHIPPING PAPERS.

GREEN. The inspectors identified a non-cited violation (NCV) for the failure to include an emergency response telephone number on shipping papers for radioactive material and waste shipments which satisfied the requirements contained in 49 CFR 172.604. The telephone number entered on the shipping papers was that of an electronic paging system, which did not provide the caller with direct contact with a person knowledgeable of the shipment or with a person who had access to an individual having that knowledge. In addition, the system did not provide any instructions to the caller on how to gain a response. Potentially, this failure could have resulted in delays obtaining emergency response information. [The inspectors determined, using the Significance Determination Process, that this finding was within the licensee response band for the public radiation safety cornerstone because the actual risk significance was low. Although the emergency response telephone contact did not fully meet the requirements of 49 CFR 172.604, the licensee provided appropriate emergency response information on the shipping papers in accordance with 49 CFR 172.602 that could have been used by emergency responders. Also, the inspectors did not identify any occasions in which the licensee failed to respond to an actual request for emergency response information.] Part 71.5 of Title 10 of

the Code of Federal Regulations (CFR) states that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transportation. Therefore, the failure to follow 49 CFR 172.604 is a violation of 10 CFR 71.5. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This NCV is in the licensee's corrective action program as Condition Report No. 19992389. The NRC tracking number for this NCV is 50-282/99011-01; 50-306/99011-01.

Inspection Report# : [1999011\(pdf\)](#)

Physical Protection

Significance:  Aug 18, 2000

Identified By: NRC

Item Type: FIN Finding

PROCEDURE FOR REPORTING BELOW MINIMUM GUARD COMPLEMENT.

The Security Event Reporting procedure described incorrect reporting requirements when the minimum number of armed responders are not available. The issue is of low safety significance because it pertains to reporting requirements rather than an actual occurrence.

Inspection Report# : [2000010\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: FIN Finding

SECURITY SHIFT STAFFING.

GREEN. The licensee's security staff have not confirmed through procedures, training, or exercises and drills that the minimum number of immediately available armed response personnel identified in the security plan can counter the security design basis threat (DBT). Defensive strategy, training, and evaluation processes include at least one more person than the minimum number required by the security plan to respond to the DBT. The licensee has agreed to continue to maintain security shift manning at the higher level confirmed by their strategy, training, and evaluation processes as adequate to counter the DBT until an analysis is completed. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not represent an increase in the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.]

Inspection Report# : [1999010\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

SOME REQUIRED TRAINING WAS NOT COMPLETED (NIGHT FIRING).

GREEN. A weapon-related annual training requirement identified in the Security Training and Qualification Plan was not completed in 1998, as required by the Commission approved Security Plan for the Prairie Island plant. The licensee has entered this issue in their corrective action program. [A risk determination of this finding was performed by NRC personnel using the Significance Determination Process and indicated that it did not increase the risk of radiological sabotage. Therefore, this issue was determined to be within the licensee response band.] The inspectors identified this failure to meet a training requirement as a Non-Cited Violation. [The tracking number for this issue is 50-282/99010-01; 50-306/99010-01.]

Inspection Report# : [1999010\(pdf\)](#)

Miscellaneous

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM IS ADEQUATE

The team concluded that the licensee was generally effective at identifying problems and putting them into the corrective action program. There was strong management emphasis in the past two years on plant staff to document problems in the corrective action program, and overall, plant has been very responsive. Inspector concerns with corrective action program timeliness and level of detail in condition reports that were noted during the previous problem identification and resolution inspection have been addressed, but continued emphasis on level of detail was needed. Corrective actions have not been effective for a persistent problem with equipment configuration control, the latter a problem that was first identified by the inspectors during the previous problem identification and resolution inspection. Based on a review of records and discussions with plant staff, the inspectors concluded that workers at the site felt free to input safety issues into the corrective action program.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Jun 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS FOR CONFIGURATION CONTROL PROBLEMS

A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure of the licensee to take effective corrective action for a recurrent problem with equipment configuration control. The ineffective corrective action was more than a minor issue because if left uncorrected, the issue could become a more significant safety concern. However, since no specific cornerstone has been impacted, this finding is designated as No Color.

Inspection Report# : [2001011\(pdf\)](#)

Significance: SL-IV Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

FAILURE TO REPORT 51.9 HOURS OF UNAVAILABILITY FOR PERFORMANCE INDICATOR

NO COLOR. The inspectors identified a Violation in that the licensee had failed to report 51.9 hours of Unit 2 residual heat removal system unavailability performance indicator data during the 2nd quarter of 2000. The finding had the potential for impacting the NRC's ability to perform its regulatory function because the additional unavailability hours caused the Unit 2 residual heat removal system unavailability performance indicator to change from Green to White in the 4th quarter of 2000. Discretion pursuant to Section VII.B.6 of the Enforcement Policy was exercised not to cite the violation.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Sep 30, 2000

Identified By: NRC

Item Type: FIN Finding

EFFECTIVE CORRECTIVE ACTION PROGRAM.

The inspectors concluded that the licensee's program effectively identified and resolved conditions adverse to quality in that the inspectors did not identify any issues that resulted in the operability of safety-related or risk significant plant equipment being questioned. The problem identification threshold within the condition report process was low. Issues were prioritized and evaluated properly, according to the significance of the problem. Operability and reportability evaluations were typically completed as required. Corrective actions were usually timely and effective in preventing recurrence. The inspectors, however, identified several examples where corrective action due dates were missed or untimely and where documentation of corrective actions was weak. In addition, the inspectors determined that the licensee had not identified a trend regarding 16 instances where valves or switches were found mispositioned. Problems

with corrective action due dates and corrective action trending, in general, had been identified in licensee self-assessments. The inspectors conducted interviews with plant personnel to ascertain the existence of a safety conscious work environment and concluded that plant personnel communicated an acceptable level of responsibility in identifying and entering safety issues into the corrective action program. The inspectors noted that licensee management was undecided about which of two forms would be the written means for employees to document identified problems and submit to the corrective action program.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A May 18, 2000

Identified By: Licensee

Item Type: FIN Finding

SAFETY TAGGING PROCEDURE NOT CORRECTLY IMPLEMENTED ON SEVERAL OCCASIONS.

NO COLOR. The licensee identified that on four separate occasions, within a relatively short period of time, errors occurred in the proper implementation of the safety tagging process. Individually, each of the deficiencies posed little or no increase in risk and were not evaluated using the Significance Determination Process due to their minor nature. However, the inspectors considered that these issues, in aggregate, constituted a human performance finding. The finding was assigned to Unit 1 and Unit 2.

Inspection Report# : [2000005\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: Licensee

Item Type: FIN Finding

EMERGENCY RESPONSE ORGANIZATION DRILL PARTICIPATION.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

ERRORS NOTED IN PERFORMANCE INDICATOR (PI) DATA.

The inspectors identified a large number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems were in the licensee's corrective action program and were being addressed.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

PROTECTED AREA SECURITY EQUIPMENT PERFORMANCE INDEX.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported Performance Indicator (PI) data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the Performance Indicator to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, AUXILIARY FEEDWATER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, EMERGENCY AC [ALTERNATING CURRENT] POWER SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, HIGH PRESSURE SAFETY INJECTION SYSTEMS.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 23, 1999

Identified By: NRC

Item Type: FIN Finding

SAFETY SYSTEM UNAVAILABILITY, RESIDUAL HEAT REMOVAL SYSTEM.

The inspectors verified the Unit 1 and Unit 2 Performance Indicator (PI) data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor.

Inspection Report# : [1999016\(pdf\)](#)

Significance: N/A Nov 05, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

LICENSED OPERATOR EXAMINATION SECURITY LAPSES (NO ACTUAL IMPACT ON THE EXAM).

The inspectors observed three examples involving licensed operator requalification examination security lapses. The examination itself was not impacted. This noncited violation [(NCV) of 10 CFR 55.49] included two instances in which personnel not on the security agreement were present during job performance measure administration on the simulator and one instance which allowed the possibility for additional unauthorized personnel to view job performance measure administration on the simulator. This violation had low safety significance because the examples did not result in invalidation of administered requalification examinations. [The tracking number for this NCV is 50-282/99018-01 (DRS); 50-306/99018-01(DRS).]

Inspection Report# : [1999018\(pdf\)](#)

Significance: N/A Oct 13, 1999

Identified By: NRC

Item Type: FIN Finding

PERFORMANCE INDICATOR DATA FOR UNPLANNED POWER CHANGES PER 7000 CRITICAL HOURS.

Unplanned Power Changes per 7000 Critical Hours. The inspectors evaluated the performance indicator data submitted for Unit 1 and Unit 2 covering the time period from the third quarter of 1998 through August 31, 1999. The inspectors identified one error in the second quarter of 1999 data for Unit 2. The reported critical hours for the second quarter showed 1 extra hour (1268 vs 1267) of critical operation. The error was in the conservative direction and attributed to incorrectly incorporating the loss of an hour due to the daylight savings time change. The licensee informed the inspectors that the error will be corrected in their next performance indicator data submittal. The calculation of the performance indicator using the correct number of critical hours did not result in the crossing of a response threshold and the performance indicator remained in the GREEN licensee response band.

Inspection Report# : [1999013\(pdf\)](#)

Significance: N/A Sep 17, 1999

Identified By: NRC

Item Type: FIN Finding

CORRECTIVE ACTION PROGRAM EFFECTIVENESS.

The existing methods of identifying and resolving problems at Prairie Island were complicated with a number of different documents used to identify and track different types of problems. Licensee personnel implemented the program well and the program was effective. No risk significant problems or performance issues were identified during the inspection. The inspectors verified that licensee personnel were cognizant of and understood the existing corrective action process and that adequate communications existed in the prompt identification, cause determination, and resolution of problems.

Inspection Report# : [1999012\(pdf\)](#)

Significance:  Aug 12, 1999

Identified By: NRC

Item Type: URI Unresolved item

INCOMPLETE DATA COLLECTED FOR SECURITY EQUIPMENT PERFORMANCE INDICATOR.

The inspectors identified that a licensee personnel error involving a failure to transfer data used to calculate and identify the index value for the Protected Area Security Equipment Performance Indicator (PI) resulted in a failure to capture all applicable PI related information. Subsequent calculation using the corrected data did not result in the crossing of a response threshold or lowering of the PI index number. The response band remained green. The licensee has entered this issue in their corrective action system. This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). Because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Inspection Report# : [1999010\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Significance:  Jul 20, 1999

Identified By: NRC

Item Type: URI Unresolved item

ERROR IN PERFORMANCE INDICATOR DATA FOR SAFETY SYSTEM FUNCTIONAL FAILURES.

The inspectors identified that the licensee had failed to count two reportable safety system failures (documented in Licensee Event Reports 1-98-12 and 1-98-14) in its performance indicator report submitted in May 1999. The licensee corrected the error in its June 1999 submittal and the additional failures caused that performance indicator for the first quarter of 1999 to change from the green band into the white band for Unit 2. The finding was assigned to both Units. The issues associated with LERs 1-98-12 and 1-98-14 had previously been assessed by the NRC during its Fire Protection Functional Inspection as discussed in Inspection Report 50-282/98016(DRS); 50-306/98016(DRS). Enforcement aspects of the issues were resolved as discussed in a letter to the licensee from the Regional Administrator, NRC Region III, dated March 30, 1999 (EA 98-526). The issues were assessed during the NRC's Plant Performance Review as reported in a letter to the licensee from the Director of Reactor Projects, NRC Region III, dated March 26, 1999. Thus, the failure to properly report the performance indicator data did not adversely affect the NRC's ability to assess licensee performance. Pending a final decision on how to resolve the failure to properly report the performance indicator data, this issue will be tracked as an unresolved item (50-282/99006-02(DRP); 50-306/99006-02(DRP)). This unresolved item was closed in inspection report 50-282/99016(DRP); 50-306/99016(DRP). It was considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," but the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation because these errors were not willful and were associated with data submitted during the voluntary pilot plant program (Enforcement Action 99-295).

Inspection Report# : [1999006\(pdf\)](#)

Inspection Report# : [1999016\(pdf\)](#)

Last modified : December 02, 2002

Prairie Island 2

Initiating Events



Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW INTERNAL FLOOD CONTROL PROCEDURE

Green. A finding of very low safety significance was identified for the existence of prohibited loose materials in the safety-related cooling water pump rooms on three separate occasions. The materials were specifically prohibited due to the potential for the loose materials to obstruct required critical drainage paths from these areas adversely affecting measures for internal flood protection. This finding is more than minor because it was associated with two of the cornerstone attributes, affected the initiating events cornerstone objective, and was repetitive. However, it was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The finding was determined to be a NCV of 10 CFR 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)



Significance: Sep 30, 2002

Identified By: NRC

Item Type: FIN Finding

INAPPROPRIATE MAINTENANCE RULE SAFETY SIGNIFICANCE CLASSIFICATION OF THE EXTERNAL CIRCULATING WATER INTAKE SCREEN BYPASS GATES

A finding of very low safety significance was identified by the inspectors investigating the repeat failures of the external circulating water intake screen bypass gates to fully open and to latch in the open position. The finding resulted from performance deficiencies associated with the establishment of an appropriate maintenance rule safety significance classification of the external circulating water intake screen bypass gates. The bypass gates were classified as low safety significant components, not as low safety significant standby components as specified by industry maintenance rule guidance. This finding was more than minor because it increased the likelihood of a reactor trip event due to a loss of circulating water. The finding was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. A violation determination could not be completed until appropriate maintenance rule performance criteria have been established and will be tracked by an Unresolved Item.

Inspection Report# : [2002008\(pdf\)](#)

Mitigating Systems



Significance: Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT DEFICIENCIES ADVERSE TO QUALITY INVOLVING POTENTIAL FLOW DIVERSION PATHS

Green. A finding of very low safety significance was identified by the inspectors during a review of licensee corrective action taken to address concerns documented in LER 1-98-15 pertaining to Appendix R potential flow diversion paths. The primary cause of this finding was related to a failure to correct or implement appropriate compensatory actions to address potential flow diversion paths that had existed since 1999. This finding is more than minor because, if left uncorrected, the finding would become a more significant safety concern. Failure to resolve fire protection non-compliance items and failure to establish appropriate compensatory measures could potentially affect the availability, reliability, and capability of fire protection safe shutdown equipment and response efforts. The inspectors determined that the finding was not suitable for SDP analysis. However, the finding was determined to be of very low safety significance because the probability of having a fire event in the affected areas such that the fire would cause more than one valve to reposition to cause a flow diversion was very low.

Inspection Report# : [2002008\(pdf\)](#)

Barrier Integrity

G

Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

LACK OF ASME CODE REQUIREMENTS IN THREE UT PROCEDURES

Green. The inspectors identified a finding of very low safety significance regarding inadequate instructions in three procedures used to conduct ultrasonic examination of plant components. Specifically, the licensee had not included the mode of ultrasonic wave propagation for the material under examination in these procedures. The finding was more than minor because if left uncorrected, it could have adversely affected the licensee's ability to perform an adequate inspection of safety-related components including the reactor vessel. The finding was of very low safety significance because the licensee confirmed that appropriate ultrasonic examinations had been conducted during past examinations. This finding was determined to be a Non-Cited Violation of 10 CFR 50.55a(g)4.

Inspection Report# : [2002009\(pdf\)](#)G

Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED TECHNICAL REVIEW FOR UT PROCEDURE

Green. The inspectors identified a finding of very low safety significance regarding failure to conduct a periodic technical review for an ultrasonic examination procedure used to detect cracks in steam generator and main steam nozzle inner radii. The finding was more than minor because if left uncorrected, it could have resulted in failure to incorporate the appropriate technical requirements into the procedure and consequently lead to an ineffective examination of plant components. The finding was of very low safety significance because the appropriate technical review was completed and only one technical error was identified which impacted the technical adequacy of the procedure. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Emergency Preparedness

G

Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED EMERGENCY CLASSIFICATION AND DECLARATION

Green. On November 3, 2002, the licensee failed to classify and declare an Unusual Event in accordance with emergency plan implementing procedures following receipt of a seismic event annunciator in the control room and after confirmation with an offsite agency of the occurrence of an earthquake in Alaska. The failure to declare an Unusual Event is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2. The finding was determined to be an NCV of 10 CFR 50.54(q), 50.47(b)(4), and Sections IV.B and IV.D.3 of Appendix E of 10 CFR 50.

Inspection Report# : [2002009\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : March 25, 2003

Prairie Island 2

1Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW INTERNAL FLOOD CONTROL PROCEDURE

Green. A finding of very low safety significance was identified for the existence of prohibited loose materials in the safety-related cooling water pump rooms on three separate occasions. The materials were specifically prohibited due to the potential for the loose materials to obstruct required critical drainage paths from these areas adversely affecting measures for internal flood protection. This finding is more than minor because it was associated with two of the cornerstone attributes, affected the initiating events cornerstone objective, and was repetitive. However, it was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The finding was determined to be a NCV of 10 CFR 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: FIN Finding

INAPPROPRIATE MAINTENANCE RULE SAFETY SIGNIFICANCE CLASSIFICATION OF THE EXTERNAL CIRCULATING WATER INTAKE SCREEN BYPASS GATES

A finding of very low safety significance was identified by the inspectors investigating the repeat failures of the external circulating water intake screen bypass gates to fully open and to latch in the open position. The finding resulted from performance deficiencies associated with the establishment of an appropriate maintenance rule safety significance classification of the external circulating water intake screen bypass gates. The bypass gates were classified as low safety significant components, not as low safety significant standby components as specified by industry maintenance rule guidance. This finding was more than minor because it increased the likelihood of a reactor trip event due to a loss of circulating water. The finding was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. A violation determination could not be completed until appropriate maintenance rule performance criteria have been established and will be tracked by an Unresolved Item.

Inspection Report# : [2002008\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT DEFICIENCIES ADVERSE TO QUALITY INVOLVING POTENTIAL FLOW DIVERSION PATHS

Green. A finding of very low safety significance was identified by the inspectors during a review of licensee corrective action taken to address concerns documented in LER 1-98-15 pertaining to Appendix R potential flow diversion paths. The primary cause of this finding was related to a failure to correct or implement appropriate compensatory actions to address potential flow diversion paths that had existed since 1999. This finding is more than minor because, if left uncorrected, the finding would become a more significant safety concern. Failure to resolve fire protection non-compliance items and failure to establish appropriate compensatory measures could potentially affect the availability, reliability, and capability of fire protection safe shutdown equipment and response efforts. The inspectors determined that the finding was not suitable for SDP analysis. However, the finding was determined to be of very low safety significance because the probability of having a fire event in the affected areas such that the fire would cause more than one valve to reposition to cause a flow diversion was very low.

Inspection Report# : [2002008\(pdf\)](#)

Barrier Integrity

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

LACK OF ASME CODE REQUIREMENTS IN THREE UT PROCEDURES

Green. The inspectors identified a finding of very low safety significance regarding inadequate instructions in three procedures used to conduct ultrasonic examination of plant components. Specifically, the licensee had not included the mode of ultrasonic wave propagation for the material under examination in these procedures. The finding was more than minor because if left uncorrected, it could have adversely affected the licensee's ability to perform an adequate inspection of safety-related components including the reactor vessel. The finding was of very low safety significance because the licensee confirmed that appropriate ultrasonic examinations had been conducted during past examinations. This finding was determined to be a Non-Cited Violation of 10 CFR 50.55a(g)4.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED TECHNICAL REVIEW FOR UT PROCEDURE

Green. The inspectors identified a finding of very low safety significance regarding failure to conduct a periodic technical review for an ultrasonic examination procedure used to detect cracks in steam generator and main steam nozzle inner radii. The finding was more than minor because if left uncorrected, it could have resulted in failure to incorporate the appropriate technical requirements into the procedure and consequently lead to an ineffective examination of plant components. The finding was of very low safety significance because the appropriate technical review was completed and only one technical error was identified which impacted the technical adequacy of the procedure. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Emergency Preparedness

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED EMERGENCY CLASSIFICATION AND DECLARATION

Green. On November 3, 2002, the licensee failed to classify and declare an Unusual Event in accordance with emergency plan implementing procedures following receipt of a seismic event annunciator in the control room and after confirmation with an offsite agency of the occurrence of an earthquake in Alaska. The failure to declare an Unusual Event is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2. The finding was determined to be an NCV of 10 CFR 50.54(q), 50.47(b)(4), and Sections IV.B and IV.D.3 of Appendix E of 10 CFR 50.

Inspection Report# : [2002009\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : May 30, 2003

Prairie Island 2

2Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW INTERNAL FLOOD CONTROL PROCEDURE

Green. A finding of very low safety significance was identified for the existence of prohibited loose materials in the safety-related cooling water pump rooms on three separate occasions. The materials were specifically prohibited due to the potential for the loose materials to obstruct required critical drainage paths from these areas adversely affecting measures for internal flood protection. This finding is more than minor because it was associated with two of the cornerstone attributes, affected the initiating events cornerstone objective, and was repetitive. However, it was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The finding was determined to be a NCV of 10 CFR 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: FIN Finding

INAPPROPRIATE MAINTENANCE RULE SAFETY SIGNIFICANCE CLASSIFICATION OF THE EXTERNAL CIRCULATING WATER INTAKE SCREEN BYPASS GATES

A finding of very low safety significance was identified by the inspectors investigating the repeat failures of the external circulating water intake screen bypass gates to fully open and to latch in the open position. The finding resulted from performance deficiencies associated with the establishment of an appropriate maintenance rule safety significance classification of the external circulating water intake screen bypass gates. The bypass gates were classified as low safety significant components, not as low safety significant standby components as specified by industry maintenance rule guidance. This finding was more than minor because it increased the likelihood of a reactor trip event due to a loss of circulating water. The finding was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. A violation determination could not be completed until appropriate maintenance rule performance criteria have been established and will be tracked by an Unresolved Item.

Inspection Report# : [2002008\(pdf\)](#)

Mitigating Systems

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECTLY TRANSLATE/MAINTAIN THE RHR DISCHARGE OVERPRESSURE INTERLOCK REMOVAL MODIFICATION'S DESIGN BASIS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the Units 1 and 2 residual heat removal (RHR) discharge overpressure interlock removal modification was not correctly translated into specifications, procedures, and instructions. Specifically, the modification's safety evaluation took credit for local operator action to manually open the RHR heat exchanger to safety injection pump suction valves during the transfer to recirculation in both units' emergency operating procedures (EOPs). However, on March 14, 2003, local operator action to manually open the valves was removed from the EOPs. This finding was greater than minor because the lack of coordination between the modification's design requirements and EOP procedural guidance affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the emergency core cooling system to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONSIDER ALL CREDIBLE FAILURES DURING THE CHANGE IN CLASSIFICATION OF THE RHR HEAT EXCHANGER OUTLET CONTROL VALVE COMPONENTS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the residual heat removal (RHR) system was not correctly maintained in accordance with regulatory requirements. Specifically, a safety evaluation was written for the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valves' positioners, hand controllers and signal converters. However, the safety evaluation failed to consider all credible failures in evaluating the single failure criterion. For example, if a required open valve's hand controller were to fail high, the valve would close and block the emergency core cooling system (ECCS) flow path. This finding was greater than minor because the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valve components affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN THE RHR PIT COVERS' DESIGN BASIS CONFIGURATION

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to maintain the design basis configuration of the residual heat removal (RHR) pit covers. Specifically, the Units 1 and 2 auxiliary building's RHR pit covers were designed to be closed during plant operation to limit the radiological dose rates to vital plant areas during accident conditions. However, prior to April 4, 2003, the Units 1 and 2 RHR pit covers were maintained in an open position during plant operation. This finding was greater than minor because the potential to affect the safety injection and RHR systems' design basis functions (i.e.,

degradation of long term heat removal) affected the mitigating systems' cornerstone objective. Specifically, local operator actions in the auxiliary building (e.g., area around the RHR pits) were required to transfer the emergency core cooling system (ECCS) to the recirculation mode. If the operator was prevented from performing the local operator actions during accident conditions due to high dose rates, then both trains of ECCS could be degraded. As a result, the cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.3)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Sep 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT DEFICIENCIES ADVERSE TO QUALITY INVOLVING POTENTIAL FLOW DIVERSION PATHS

Green. A finding of very low safety significance was identified by the inspectors during a review of licensee corrective action taken to address concerns documented in LER 1-98-15 pertaining to Appendix R potential flow diversion paths. The primary cause of this finding was related to a failure to correct or implement appropriate compensatory actions to address potential flow diversion paths that had existed since 1999. This finding is more than minor because, if left uncorrected, the finding would become a more significant safety concern. Failure to resolve fire protection non-compliance items and failure to establish appropriate compensatory measures could potentially affect the availability, reliability, and capability of fire protection safe shutdown equipment and response efforts. The inspectors determined that the finding was not suitable for SDP analysis. However, the finding was determined to be of very low safety significance because the probability of having a fire event in the affected areas such that the fire would cause more than one valve to reposition to cause a flow diversion was very low.

Inspection Report# : [2002008\(pdf\)](#)

Barrier Integrity

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

LACK OF ASME CODE REQUIREMENTS IN THREE UT PROCEDURES

Green. The inspectors identified a finding of very low safety significance regarding inadequate instructions in three procedures used to conduct ultrasonic examination of plant components. Specifically, the licensee had not included the mode of ultrasonic wave propagation for the material under examination in these procedures. The finding was more than minor because if left uncorrected, it could have adversely affected the licensee's ability to perform an adequate inspection of safety-related components including the reactor vessel. The finding was of very low safety significance because the licensee confirmed that appropriate ultrasonic examinations had been conducted during past examinations. This finding was determined to be a Non-Cited Violation of 10 CFR 50.55a(g)4.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED TECHNICAL REVIEW FOR UT PROCEDURE

Green. The inspectors identified a finding of very low safety significance regarding failure to conduct a periodic technical review for an ultrasonic examination procedure used to detect cracks in steam generator and main steam nozzle inner radii. The finding was more than minor because if left uncorrected, it could have resulted in failure to incorporate the appropriate technical requirements into the procedure and consequently lead to an ineffective examination of plant components. The finding was of very low safety significance because the appropriate technical review was completed and only one technical error was identified which impacted the technical adequacy of the procedure. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V. Inspection Report# : [2002009\(pdf\)](#)

Emergency Preparedness

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED EMERGENCY CLASSIFICATION AND DECLARATION

Green. On November 3, 2002, the licensee failed to classify and declare an Unusual Event in accordance with emergency plan implementing procedures following receipt of a seismic event annunciator in the control room and after confirmation with an offsite agency of the occurrence of an earthquake in Alaska. The failure to declare an Unusual Event is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2. The finding was determined to be an NCV of 10 CFR 50.54(q), 50.47(b)(4), and Sections IV.B and IV.D.3 of Appendix E of 10 CFR 50.

Inspection Report# : [2002009\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : September 04, 2003

Prairie Island 2

3Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Sep 18, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS TO PREVENT RECURRENCE FOR THE CONTROL OF MATERIAL THAT COULD POTENTIALLY BLOCK CRITICAL DRAIN PATHS

Green. The inspectors identified a finding of very low safety significance for inadequate corrective actions to preclude repetition. Specifically, licensee actions taken in October and November 2002 to address inadvertent blocking of critical drainage paths associated with safety-related cooling water (CL) pumps were ineffective. This was evident when the inspectors identified, during the inspection, plastic caution signs on the floor of the 121 CL pump room with no measures to secure them from blocking critical drainage paths. Once identified, the licensee removed the material to ensure that the critical drain path could not be blocked. This finding also affected the cross-cutting area of Problem Identification and Resolution because the corrective actions for a significant condition adverse to quality were inadequate to preclude repetition.

This issue was more than minor because the design control and human performance attributes of initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations were affected. The materials identified in the 121 CL pump room changed the physical conditions assumed in the internal flooding analysis. The finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failing to take actions to preclude repetition of a significant condition adverse to quality.

Inspection Report# : [2003007\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW INTERNAL FLOOD CONTROL PROCEDURE

Green. A finding of very low safety significance was identified for the existence of prohibited loose materials in the safety-related cooling water pump rooms on three separate occasions. The materials were specifically prohibited due to the potential for the loose materials to obstruct required critical drainage paths from these areas adversely affecting measures for internal flood protection.

This finding is more than minor because it was associated with two of the cornerstone attributes, affected the initiating events cornerstone objective, and was repetitive. However, it was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not

increase the likelihood of a fire or internal/external flood. The finding was determined to be a NCV of 10 CFR 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Mitigating Systems

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECTLY TRANSLATE/MAINTAIN THE RHR DISCHARGE OVERPRESSURE INTERLOCK REMOVAL MODIFICATION'S DESIGN BASIS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the Units 1 and 2 residual heat removal (RHR) discharge overpressure interlock removal modification was not correctly translated into specifications, procedures, and instructions. Specifically, the modification's safety evaluation took credit for local operator action to manually open the RHR heat exchanger to safety injection pump suction valves during the transfer to recirculation in both units' emergency operating procedures (EOPs). However, on March 14, 2003, local operator action to manually open the valves was removed from the EOPs.

This finding was greater than minor because the lack of coordination between the modification's design requirements and EOP procedural guidance affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the emergency core cooling system to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONSIDER ALL CREDIBLE FAILURES DURING THE CHANGE IN CLASSIFICATION OF THE RHR HEAT EXCHANGER OUTLET CONTROL VALVE COMPONENTS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the residual heat removal (RHR) system was not correctly maintained in accordance with regulatory requirements. Specifically, a safety evaluation was written for the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valves' positioners, hand controllers and signal converters. However, the safety evaluation failed to consider all credible failures in evaluating the single failure criterion. For example, if a required open valve's hand controller were to fail high, the valve would close and block the emergency core cooling system (ECCS) flow path.

This finding was greater than minor because the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valve components affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN THE RHR PIT COVERS' DESIGN BASIS CONFIGURATION

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to maintain the design basis configuration of the residual heat removal (RHR) pit covers. Specifically, the Units 1 and 2 auxiliary building's RHR pit covers were designed to be closed during plant operation to limit the radiological dose rates to vital plant areas during accident conditions. However, prior to April 4, 2003, the Units 1 and 2 RHR pit covers were maintained in an open position during plant operation.

This finding was greater than minor because the potential to affect the safety injection and RHR systems' design basis functions (i.e., degradation of long term heat removal) affected the mitigating systems' cornerstone objective. Specifically, local operator actions in the auxiliary building (e.g., area around the RHR pits) were required to transfer the emergency core cooling system (ECCS) to the recirculation mode. If the operator was prevented from performing the local operator actions during accident conditions due to high dose rates, then both trains of ECCS could be degraded. As a result, the cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.3)

Inspection Report# : [2003003\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE QUANTITATIVE/QUALITATIVE ACCEPTANCE CRITERIA

Green. A finding of very low safety significance was identified by inspectors during a plant status review of scheduled surveillance testing and daily work. The licensee concurrently scheduled the performance auxiliary building special ventilation system surveillance tests while conducting painting in areas of the auxiliary building that communicated with the ventilation system. The primary cause for the finding was inadequate procedural guidance in the licensee's procedure for the protection of pre-, absolute, and charcoal ventilation filters from contamination.

The finding was determined to be more than minor since if left uncorrected the condition would become a more significant safety concern as additional operation of the auxiliary building special ventilation system occurred concurrently with painting activities and would eventually have resulted in the inoperability of the auxiliary building special ventilation system filter units. The finding only represents a degradation of the radiological barrier function provided for the auxiliary building and has been determined to be a finding of very low safety significance. The finding was determined to be a violation 10 CFR Part 50, Appendix B, Criterion V, for a failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Inspection Report# : [2003005\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

LACK OF ASME CODE REQUIREMENTS IN THREE UT PROCEDURES

Green. The inspectors identified a finding of very low safety significance regarding inadequate instructions in three procedures used to conduct ultrasonic examination of plant components. Specifically, the licensee had not included the mode of ultrasonic wave propagation for the material under examination in these procedures.

The finding was more than minor because if left uncorrected, it could have adversely affected the licensee's ability to perform an adequate inspection of safety-related components including the reactor vessel. The finding was of very low safety significance because the licensee confirmed that appropriate ultrasonic examinations had been conducted during past examinations. This finding was determined to be a Non-Cited Violation of 10 CFR 50.55a(g)4.

Inspection Report# : [2002009\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED TECHNICAL REVIEW FOR UT PROCEDURE

Green. The inspectors identified a finding of very low safety significance regarding failure to conduct a periodic technical review for an ultrasonic examination procedure used to detect cracks in steam generator and main steam nozzle inner radii.

The finding was more than minor because if left uncorrected, it could have resulted in failure to incorporate the appropriate technical requirements into the procedure and consequently lead to an ineffective examination of plant components. The finding was of very low safety significance because the appropriate technical review was completed and only one technical error was identified which impacted the technical adequacy of the procedure. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V.

Inspection Report# : [2002009\(pdf\)](#)

Emergency Preparedness

Significance:  Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED EMERGENCY CLASSIFICATION AND DECLARATION

Green. On November 3, 2002, the licensee failed to classify and declare an Unusual Event in accordance with emergency plan implementing procedures following receipt of a seismic event annunciator in the control room and after confirmation with an offsite agency of the occurrence of an earthquake in Alaska.

The failure to declare an Unusual Event is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2. The finding was determined to be an NCV of 10 CFR 50.54(q), 50.47(b)(4), and Sections IV.B and IV.D.3 of Appendix E of 10 CFR 50.

Inspection Report# : [2002009\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : December 01, 2003

Prairie Island 2

4Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Sep 18, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS TO PREVENT RECURRENCE FOR THE CONTROL OF MATERIAL THAT COULD POTENTIALLY BLOCK CRITICAL DRAIN PATHS

Green. The inspectors identified a finding of very low safety significance for inadequate corrective actions to preclude repetition. Specifically, licensee actions taken in October and November 2002 to address inadvertent blocking of critical drainage paths associated with safety-related cooling water (CL) pumps were ineffective. This was evident when the inspectors identified, during the inspection, plastic caution signs on the floor of the 121 CL pump room with no measures to secure them from blocking critical drainage paths. Once identified, the licensee removed the material to ensure that the critical drain path could not be blocked. This finding also affected the cross-cutting area of Problem Identification and Resolution because the corrective actions for a significant condition adverse to quality were inadequate to preclude repetition.

This issue was more than minor because the design control and human performance attributes of initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations were affected. The materials identified in the 121 CL pump room changed the physical conditions assumed in the internal flooding analysis. The finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failing to take actions to preclude repetition of a significant condition adverse to quality.

Inspection Report# : [2003007\(pdf\)](#)

Mitigating Systems

Significance:  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECTLY TRANSLATE/MAINTAIN THE RHR DISCHARGE OVERPRESSURE INTERLOCK REMOVAL MODIFICATION'S DESIGN BASIS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the Units 1 and 2 residual heat removal (RHR) discharge overpressure interlock removal modification was not correctly translated into specifications, procedures, and instructions. Specifically, the modification's safety evaluation took credit for local operator action to manually open the RHR heat exchanger to

safety injection pump suction valves during the transfer to recirculation in both units' emergency operating procedures (EOPs). However, on March 14, 2003, local operator action to manually open the valves was removed from the EOPs.

This finding was greater than minor because the lack of coordination between the modification's design requirements and EOP procedural guidance affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the emergency core cooling system to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2003003\(pdf\)](#)



Significance: Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONSIDER ALL CREDIBLE FAILURES DURING THE CHANGE IN CLASSIFICATION OF THE RHR HEAT EXCHANGER OUTLET CONTROL VALVE COMPONENTS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the residual heat removal (RHR) system was not correctly maintained in accordance with regulatory requirements. Specifically, a safety evaluation was written for the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valves' positioners, hand controllers and signal converters. However, the safety evaluation failed to consider all credible failures in evaluating the single failure criterion. For example, if a required open valve's hand controller were to fail high, the valve would close and block the emergency core cooling system (ECCS) flow path.

This finding was greater than minor because the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valve components affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2003003\(pdf\)](#)



Significance: Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN THE RHR PIT COVERS' DESIGN BASIS CONFIGURATION

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to maintain the design basis configuration of the residual heat removal (RHR) pit covers. Specifically, the Units 1 and 2 auxiliary building's RHR pit covers were designed to be closed during plant operation to limit the radiological dose rates to vital plant areas during accident conditions. However, prior to April 4, 2003, the Units 1 and 2 RHR pit covers were maintained in an open position during plant operation.

This finding was greater than minor because the potential to affect the safety injection and RHR systems' design basis functions (i.e., degradation of long term heat removal) affected the mitigating systems' cornerstone objective. Specifically, local operator actions in the auxiliary building (e.g., area around the RHR pits) were required to transfer the emergency core cooling system (ECCS) to the recirculation mode. If the operator was prevented from performing the local operator actions during accident conditions due to high dose rates, then both trains of ECCS could be degraded. As a result, the cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.3)

Inspection Report# : [2003003\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE QUANTITATIVE/QUALITATIVE ACCEPTANCE CRITERIA

Green. A finding of very low safety significance was identified by inspectors during a plant status review of scheduled surveillance testing and daily work. The licensee concurrently scheduled the performance auxiliary building special ventilation system surveillance tests while conducting painting in areas of the auxiliary building that communicated with the ventilation system. The primary cause for the finding was inadequate procedural guidance in the licensee's procedure for the protection of pre-, absolute, and charcoal ventilation filters from contamination.

The finding was determined to be more than minor since if left uncorrected the condition would become a more significant safety concern as additional operation of the auxiliary building special ventilation system occurred concurrently with painting activities and would eventually have resulted in the inoperability of the auxiliary building special ventilation system filter units. The finding only represents a degradation of the radiological barrier function provided for the auxiliary building and has been determined to be a finding of very low safety significance. The finding was determined to be a violation 10 CFR Part 50, Appendix B, Criterion V, for a failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Inspection Report# : [2003005\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : March 02, 2004

Prairie Island 2

1Q/2004 Plant Inspection Findings

Initiating Events



Significance: Mar 05, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Transient combustibles invalidated exemption for lack of a fire suppression system

A finding of very low safety significance was identified by the inspectors in that a hazardous quantity of transient combustibles was present in fire areas 58 and 73. The hazardous quantity of transient combustibles present invalidated an existing exemption for the lack of a fire suppression system.

Inspection Report# : [2004002\(pdf\)](#)



Significance: Sep 18, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS TO PREVENT RECURRENCE FOR THE CONTROL OF MATERIAL THAT COULD POTENTIALLY BLOCK CRITICAL DRAIN PATHS

Green. The inspectors identified a finding of very low safety significance for inadequate corrective actions to preclude repetition. Specifically, licensee actions taken in October and November 2002 to address inadvertent blocking of critical drainage paths associated with safety-related cooling water (CL) pumps were ineffective. This was evident when the inspectors identified, during the inspection, plastic caution signs on the floor of the 121 CL pump room with no measures to secure them from blocking critical drainage paths. Once identified, the licensee removed the material to ensure that the critical drain path could not be blocked. This finding also affected the cross-cutting area of Problem Identification and Resolution because the corrective actions for a significant condition adverse to quality were inadequate to preclude repetition.

This issue was more than minor because the design control and human performance attributes of initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations were affected. The materials identified in the 121 CL pump room changed the physical conditions assumed in the internal flooding analysis. The finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failing to take actions to preclude repetition of a significant condition adverse to quality.

Inspection Report# : [2003007\(pdf\)](#)

Mitigating Systems



Significance: Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECTLY TRANSLATE/MAINTAIN THE RHR DISCHARGE OVERPRESSURE INTERLOCK REMOVAL MODIFICATION'S DESIGN BASIS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the Units 1 and 2 residual heat removal (RHR) discharge overpressure interlock removal modification was not correctly translated into specifications, procedures, and instructions. Specifically, the modification's safety evaluation took credit for local operator action to manually open the RHR heat exchanger to safety injection pump suction valves during the transfer to recirculation in both units' emergency operating procedures (EOPs). However, on March 14, 2003, local operator action to manually open the valves was removed from the EOPs.

This finding was greater than minor because the lack of coordination between the modification's design requirements and EOP procedural guidance affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the emergency core cooling system to respond to initiating events was affected. The finding was of very low safety significance

because it did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2003003\(pdf\)](#)



Significance: Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONSIDER ALL CREDIBLE FAILURES DURING THE CHANGE IN CLASSIFICATION OF THE RHR HEAT EXCHANGER OUTLET CONTROL VALVE COMPONENTS

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, the design bases for the residual heat removal (RHR) system was not correctly maintained in accordance with regulatory requirements. Specifically, a safety evaluation was written for the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valves' positioners, hand controllers and signal converters. However, the safety evaluation failed to consider all credible failures in evaluating the single failure criterion. For example, if a required open valve's hand controller were to fail high, the valve would close and block the emergency core cooling system (ECCS) flow path.

This finding was greater than minor because the change in classification from safety related to non-safety related for the Units 1 and 2 RHR heat exchanger flow control valve components affected the mitigating systems' cornerstone objective. The cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2003003\(pdf\)](#)



Significance: Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN THE RHR PIT COVERS' DESIGN BASIS CONFIGURATION

Green. The inspection team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to maintain the design basis configuration of the residual heat removal (RHR) pit covers. Specifically, the Units 1 and 2 auxiliary building's RHR pit covers were designed to be closed during plant operation to limit the radiological dose rates to vital plant areas during accident conditions. However, prior to April 4, 2003, the Units 1 and 2 RHR pit covers were maintained in an open position during plant operation.

This finding was greater than minor because the potential to affect the safety injection and RHR systems' design basis functions (i.e., degradation of long term heat removal) affected the mitigating systems' cornerstone objective. Specifically, local operator actions in the auxiliary building (e.g., area around the RHR pits) were required to transfer the emergency core cooling system (ECCS) to the recirculation mode. If the operator was prevented from performing the local operator actions during accident conditions due to high dose rates, then both trains of ECCS could be degraded. As a result, the cornerstone's objective of ensuring the availability, reliability, and capability of the ECCS to respond to initiating events was affected. The finding was of very low safety significance because it did not represent an actual loss of a safety function. (Section 1R21.2b.3)

Inspection Report# : [2003003\(pdf\)](#)

Barrier Integrity



Significance: Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE QUANTITATIVE/QUALITATIVE ACCEPTANCE CRITERIA

Green. A finding of very low safety significance was identified by inspectors during a plant status review of scheduled surveillance testing and daily work. The licensee concurrently scheduled the performance auxiliary building special ventilation system surveillance tests while conducting painting in areas of the auxiliary building that communicated with the ventilation system. The primary cause for the finding was inadequate procedural guidance in the licensee's procedure for the protection of pre-, absolute, and charcoal ventilation filters from contamination.

The finding was determined to be more than minor since if left uncorrected the condition would become a more significant safety concern as additional operation of the auxiliary building special ventilation system occurred concurrently with painting activities and would eventually have resulted in the inoperability of the auxiliary building special ventilation system filter units. The finding only represents a degradation of the radiological barrier function provided for the auxiliary building and has been determined to be a finding of very low safety significance. The finding was determined to be a violation 10 CFR Part 50, Appendix B, Criterion V, for a failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : May 05, 2004

Prairie Island 2

2Q/2004 Plant Inspection Findings

Initiating Events


Significance:  Jun 30, 2004
Identified By: NRC
Item Type: FIN Finding

MISSILE HAZARDS IN THE SWITCH YARD

The inspectors identified loose decking materials installed on several equipment access platforms in the Prairie Island Nuclear Generating Plant switchyard. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.


Inspection Report# : [2004005\(pdf\)](#)

Significance:  Mar 05, 2004
Identified By: NRC
Item Type: NCV NonCited Violation

Transient combustibles invalidated exemption for lack of a fire suppression system

A finding of very low safety significance was identified by the inspectors in that a hazardous quantity of transient combustibles was present in fire areas 58 and 73. The hazardous quantity of transient combustibles present invalidated an existing exemption for the lack of a fire suppression system.

Inspection Report# : [2004002\(pdf\)](#)

Significance:  Sep 18, 2003
Identified By: NRC
Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS TO PREVENT RECURRENCE FOR THE CONTROL OF MATERIAL THAT COULD POTENTIALLY BLOCK CRITICAL DRAIN PATHS

Green. The inspectors identified a finding of very low safety significance for inadequate corrective actions to preclude repetition. Specifically, licensee actions taken in October and November 2002 to address inadvertent blocking of critical drainage paths associated with safety-related cooling water (CL) pumps were ineffective. This was evident when the inspectors identified, during the inspection, plastic caution signs on the floor of the 121 CL pump room with no measures to secure them from blocking critical drainage paths. Once identified, the licensee removed the material to ensure that the critical drain path could not be blocked. This finding also affected the cross-cutting area of Problem Identification and Resolution because the corrective actions for a significant condition adverse to quality were inadequate to preclude repetition.

This issue was more than minor because the design control and human performance attributes of initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations were affected. The materials identified in the 121 CL pump room changed the physical conditions assumed in the internal flooding analysis. The finding was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not increase the likelihood of a fire or internal/external flood. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failing to take actions to preclude repetition of a significant condition adverse to quality.

Inspection Report# : [2003007\(pdf\)](#)

Mitigating Systems

Significance:  Jun 30, 2004
Identified By: NRC

Item Type: NCV NonCited Violation

INAPPROPRIATE ACCEPTANCE CRITERIA FOR DIESEL DRIVEN COOLING WATER PUMP HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance regarding inadequate acceptance criteria for the licensee's Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment" heat exchanger inspections. The inspectors identified this issue during observation and review of the licensee's inspection of cooling water system heat exchangers. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The inspectors determined that the finding was more than minor because it adversely affected the licensee's ability to ensure that safety-related heat exchangers would be available, reliable, and capable of responding to initiating events to prevent undesirable consequences. The finding was of very low safety significance because the as-found and as-left conditions of the heat exchangers did not reveal any actual concerns with the operability of the heat exchangers.

Inspection Report# : [2004005\(pdf\)](#)

Significance:  Mar 05, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Cycling of Safety Injection Pumps for Fire Scenarios

The inspectors identified a finding of very low safety significance regarding the licensee's failure to assure that the design basis of the plant was accurately translated and maintained in Attachment 1, "Inventory Control with a Safety Injection Pump," of Procedure F5, Appendix D, "Impact of Fire Outside Control/Relay Room." Specifically, limitations on the starting and stopping of the safety injection pump motors that prevent motor degradation were not translated from the vendor manual to the plant procedure. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

The inspectors determined that the finding was more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The violation was determined to be of very low safety significance since the licensee was able to determine that any adverse effects to the pump motor would be long term in nature and would not affect immediate operability.

Inspection Report# : [2004002\(pdf\)](#)

Inspection Report# : [2004005\(pdf\)](#)

Barrier Integrity

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED UT EXAMINATIONS FOR SG 12 AND SG 21 W-A WELDS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to perform ultrasonic examinations on additional tubesheet-to-head welds in steam generators 12 and 21 following identification of indications on similar welds. The finding constituted a Non-Cited Violation of 10 CFR 50.55a(g)(4).

The inspectors determined that the finding was more than minor because it affected the barrier integrity cornerstone objective of maintaining the reactor coolant system barrier integrity and if left uncorrected, could allow unacceptable piping system weld flaws to remain in-service. The finding was of very low safety significance because the welds were subsequently ultrasonically examined and the affected welds did not have flaws greater than that allowed by the American Society of Mechanical Engineers Code.

Inspection Report# : [2004005\(pdf\)](#)

Significance:  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE QUANTITATIVE/QUALITATIVE ACCEPTANCE CRITERIA

Green. A finding of very low safety significance was identified by inspectors during a plant status review of scheduled surveillance testing and daily work. The licensee concurrently scheduled the performance auxiliary building special ventilation system surveillance tests while conducting painting in areas of the auxiliary building that communicated with the ventilation system. The primary cause for the finding was inadequate procedural guidance in the licensee's procedure for the protection of pre-, absolute, and charcoal ventilation filters from contamination.

The finding was determined to be more than minor since if left uncorrected the condition would become a more significant safety concern as additional operation of the auxiliary building special ventilation system occurred concurrently with painting activities and would eventually have resulted in the inoperability of the auxiliary building special ventilation system filter units. The finding only represents a degradation of the radiological barrier function provided for the auxiliary building and has been determined to be a finding of very low safety significance. The finding was determined to be a violation 10 CFR Part 50, Appendix B, Criterion V, for a failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : September 08, 2004

Prairie Island 2

3Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: FIN Finding

MISSILE HAZARDS IN THE SWITCH YARD

The inspectors identified loose decking materials installed on several equipment access platforms in the Prairie Island Nuclear Generating Plant switchyard. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2004005\(pdf\)](#)

Significance:  Mar 05, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Transient combustibles invalidated exemption for lack of a fire suppression system

A finding of very low safety significance was identified by the inspectors in that a hazardous quantity of transient combustibles was present in fire areas 58 and 73. The hazardous quantity of transient combustibles present invalidated anexisting exemption for the lack of a fire suppression system.

Inspection Report# : [2004002\(pdf\)](#)

Mitigating Systems

Significance:  Aug 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO NOTIFY THE NRC OF A CHANGE IN OPERATOR STATUS IN ACCORDANCE WITH 10 CFR 50.74(c)

The inspector identified a violation of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspector identified that the facility licensee failed to notify the NRC within 30 days after receiving a change in medical status of a licensed operator from the station's medical examiner. The change in medical status required conditioning the operator's license by the NRC.

Inspection Report# : [2004007\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INAPPROPRIATE ACCEPTANCE CRITERIA FOR DIESEL DRIVEN COOLING WATER PUMP HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance regarding inadequate acceptance criteria for the licensee's Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment" heat exchanger inspections. The inspectors identified this issue during observation and review of the licensee's inspection of cooling water system heat exchangers. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The inspectors determined that the finding was more than minor because it adversely affected the licensee's ability to ensure that safety-related heat exchangers would be available, reliable, and capable of responding to initiating events to prevent undesirable consequences. The finding was of very low safety significance because the as-found and as-left conditions of the heat exchangers did not reveal any actual concerns with

the operability of the heat exchangers.

Inspection Report# : [2004005\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CYCLING OF SAFETY INJECTION PUMPS FOR FIRE SCENARIOS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to assure that the design basis of the plant was accurately translated and maintained in Attachment 1, "Inventory Control with a Safety Injection Pump," of Procedure F5, Appendix D, "Impact of Fire Outside Control/Relay Room." Specifically, limitations on the starting and stopping of the safety injection pump motors that prevent motor degradation were not translated from the vendor manual to the plant procedure. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

The inspectors determined that the finding was more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The violation was determined to be of very low safety significance since the licensee was able to determine that any adverse effects to the pump motor would be long term in nature and would not affect immediate operability.

Inspection Report# : [2004005\(pdf\)](#)

Barrier Integrity

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED UT EXAMINATIONS FOR SG 12 AND SG 21 W-A WELDS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to perform ultrasonic examinations on additional tubesheet-to-head welds in steam generators 12 and 21 following identification of indications on similar welds. The finding constituted a Non-Cited Violation of 10 CFR 50.55a(g)(4).

The inspectors determined that the finding was more than minor because it affected the barrier integrity cornerstone objective of maintaining the reactor coolant system barrier integrity and if left uncorrected, could allow unacceptable piping system weld flaws to remain in-service. The finding was of very low safety significance because the welds were subsequently ultrasonically examined and the affected welds did not have flaws greater than that allowed by the American Society of Mechanical Engineers Code.

Inspection Report# : [2004005\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : December 29, 2004

Prairie Island 2

4Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: FIN Finding

MISSILE HAZARDS IN THE SWITCH YARD

The inspectors identified loose decking materials installed on several equipment access platforms in the Prairie Island Nuclear Generating Plant switchyard. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2004005\(pdf\)](#)

Significance:  Mar 05, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

TRANSIENT COMBUSTIBLES INVALIDATED EXEMPTION FOR LACK OF A FIRE SUPPRESSION SYSTEM

A finding of very low safety significance was identified by the inspectors in that a hazardous quantity of transient combustibles was present in fire areas 58 and 73. The hazardous quantity of transient combustibles present invalidated anexisting exemption for the lack of a fire suppression system.

Inspection Report# : [2004002\(pdf\)](#)

Mitigating Systems

Significance:  Aug 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO NOTIFY THE NRC OF A CHANGE IN OPERATOR STATUS IN ACCORDANCE WITH 10 CFR 50.74(c)

The inspector identified a violation of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspector identified that the facility licensee failed to notify the NRC within 30 days after receiving a change in medical status of a licensed operator from the station's medical examiner. The change in medical status required conditioning the operator's license by the NRC.

Inspection Report# : [2004007\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INAPPROPRIATE ACCEPTANCE CRITERIA FOR DIESEL DRIVEN COOLING WATER PUMP HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance regarding inadequate acceptance criteria for the licensee's Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment" heat exchanger inspections. The inspectors identified this issue during observation and review of the licensee's inspection of cooling water system heat exchangers. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The inspectors determined that the finding was more than minor because it adversely affected the licensee's ability to ensure that safety-related heat exchangers would be available, reliable, and capable of responding to initiating events to prevent undesirable consequences. The finding was of very low safety significance because the as-found and as-left conditions of the heat exchangers did not reveal any actual concerns with

the operability of the heat exchangers.
Inspection Report# : [2004005\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CYCLING OF SAFETY INJECTION PUMPS FOR FIRE SCENARIOS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to assure that the design basis of the plant was accurately translated and maintained in Attachment 1, "Inventory Control with a Safety Injection Pump," of Procedure F5, Appendix D, "Impact of Fire Outside Control/Relay Room." Specifically, limitations on the starting and stopping of the safety injection pump motors that prevent motor degradation were not translated from the vendor manual to the plant procedure. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

The inspectors determined that the finding was more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The violation was determined to be of very low safety significance since the licensee was able to determine that any adverse effects to the pump motor would be long term in nature and would not affect immediate operability.

Inspection Report# : [2004005\(pdf\)](#)

Barrier Integrity

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY IDENTIFY AND CORRECT CONDITIONS ADVERSE TO QUALITY ASSOCIATED WITH MULTIPLE 121 CRAH FAILURES.

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the 121 control room air handler. Specifically, the licensee failed to execute a comprehensive and systematic maintenance troubleshooting process as required by plant procedures. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the ineffective troubleshooting resulted in a failure to promptly identify and correct conditions adverse to quality and prevent recurrence of 121 CRAH failures. The licensee's ineffective troubleshooting efforts resulted in multiple performance failures of the safety-related control room ventilation system and several unplanned Technical Specification Limiting Condition for Operation entries. The licensee implemented corrective actions to revise the troubleshooting process to meet industry best practices and developed training on troubleshooting techniques.

The inspectors concluded that the licensee's failure to conduct troubleshooting activities in a comprehensive and systematic manner and was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because degraded and uncorrected conditions associated the 121 control room air handler could become a precursor to a more significant event. Since the finding only represented a degradation of the radiological barrier function provided for the control room, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY THAT IMPORTANT INFORMATION ASSOCIATED WITH LTOP DESIGN BASIS WAS NOT INCLUDED IN OPERABILITY EVALUATION

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the low temperature overpressure protection function of the pressurizer power operated relief valves. Specifically, the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer power operated relief valve cycles required to complete the low temperature overpressure protection function for a postulated mass injection event prior to the determination that the function remained operable. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer PORV cycles required to complete the LTOP function for a postulated mass injection event prior to the determination that the function remained operable. The licensee implemented corrective actions that included the identification of LTOP design basis requirements; establishment of new and more conservative LTOP design basis; and the development, installation, and testing of a recurring temporary modification.

The inspectors determined that a performance deficiency existed with the problem identification and resolution actions taken by the licensee

during development and review of the operability recommendation. The finding was more than minor since it could be viewed as a precursor to a more significant event such as a failure of the reactor coolant system barrier integrity and affected the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide release caused by accidents and events, and was associated cornerstone attributes of reactor coolant system equipment and barrier performance. Since sufficient mitigating capabilities were maintained and no non-compliance with Technical Specifications were identified, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED UT EXAMINATIONS FOR SG 12 AND SG 21 W-A WELDS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to perform ultrasonic examinations on additional tubesheet-to-head welds in steam generators 12 and 21 following identification of indications on similar welds. The finding constituted a Non-Cited Violation of 10 CFR 50.55a(g)(4).

The inspectors determined that the finding was more than minor because it affected the barrier integrity cornerstone objective of maintaining the reactor coolant system barrier integrity and if left uncorrected, could allow unacceptable piping system weld flaws to remain in-service. The finding was of very low safety significance because the welds were subsequently ultrasonically examined and the affected welds did not have flaws greater than that allowed by the American Society of Mechanical Engineers Code.

Inspection Report# : [2004005\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : March 09, 2005

Prairie Island 2

1Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: FIN Finding

MISSILE HAZARDS IN THE SWITCH YARD

The inspectors identified loose decking materials installed on several equipment access platforms in the Prairie Island Nuclear Generating Plant switchyard. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2004005\(pdf\)](#)

Mitigating Systems

Significance:  Aug 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO NOTIFY THE NRC OF A CHANGE IN OPERATOR STATUS IN ACCORDANCE WITH 10 CFR 50.74(c)

The inspector identified a violation of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspector identified that the facility licensee failed to notify the NRC within 30 days after receiving a change in medical status of a licensed operator from the station's medical examiner. The change in medical status required conditioning the operator's license by the NRC.

Inspection Report# : [2004007\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INAPPROPRIATE ACCEPTANCE CRITERIA FOR DIESEL DRIVEN COOLING WATER PUMP HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance regarding inadequate acceptance criteria for the licensee's Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment" heat exchanger inspections. The inspectors identified this issue during observation and review of the licensee's inspection of cooling water system heat exchangers. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The inspectors determined that the finding was more than minor because it adversely affected the licensee's ability to ensure that safety-related heat exchangers would be available, reliable, and capable of responding to initiating events to prevent undesirable consequences. The finding was of very low safety significance because the as-found and as-left conditions of the heat exchangers did not reveal any actual concerns with the operability of the heat exchangers.

Inspection Report# : [2004005\(pdf\)](#)

Significance:  Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CYCLING OF SAFETY INJECTION PUMPS FOR FIRE SCENARIOS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to assure that the design basis of the plant was accurately translated and maintained in Attachment 1, "Inventory Control with a Safety Injection Pump," of Procedure F5, Appendix D,

"Impact of Fire Outside Control/Relay Room." Specifically, limitations on the starting and stopping of the safety injection pump motors that prevent motor degradation were not translated from the vendor manual to the plant procedure. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

The inspectors determined that the finding was more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The violation was determined to be of very low safety significance since the licensee was able to determine that any adverse effects to the pump motor would be long term in nature and would not affect immediate operability.

Inspection Report# : [2004005\(pdf\)](#)

Barrier Integrity

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT PROMPT AND EFFECTIVE CORRECTIVE ACTIONS FOR REPETITIVE FAILURES OF CONTAINMENT FAN COIL UNITS

The inspectors identified a finding of very low safety significance for inadequate corrective actions associated with the repetitive failure of Unit 1 and 2 containment fan coil units (CFCUs). Specifically, the licensee failed to identify and correct the root cause of the accelerated erosion of the CFCUs and to implement effective corrective actions in a timely manner to preclude repeat failures of these significant conditions adverse to quality. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution (corrective actions) because the ineffective implementation of the licensee's corrective action program allowed the root cause of a Unit 1 fan coil unit failure in November 2001, to go unidentified and was not corrected. The licensee's inadequate corrective action has resulted in multiple performance failures of the safety-related containment cooling system and multiple unplanned Technical Specifications (TS) Limiting Condition for Operation (LCO) entries. The licensee has conducted a root cause evaluation, identified long-term corrective actions to prevent future failures, and has implemented short-term corrective actions to reduce the erosion rate until long-term corrective actions are fully implemented.

The inspectors concluded that the licensee's failure to identify the root cause of the fan coil unit accelerated erosion and implement effective corrective action to preclude recurrence was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the finding affected the barrier integrity cornerstone objective to provide reasonable assurance that the physical design barriers (the reactor containment) protect the public from radionuclide release from accidents or events. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

Significance:  Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET TECHNICAL SPECIFICATION 3.0.3 REQUIREMENTS

The inspectors identified a finding of very low safety significance for a failure to comply with the required actions of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.0.3. Specifically, the licensee failed to place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours of entry into TS LCO 3.0.3 after 2 CFCUs, each from opposite trains, were declared inoperable on February 11, 2005. This finding constituted a Non-Cited Violation of TS LCO 3.0.3. The inspectors determined that the finding impacted the cross-cutting area of Human Performance (organization) because the licensee's management organization failed to carefully assess the situation regarding TS compliance. The licensee's decision to not place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours was based on a conclusion reached in an operability evaluation. That evaluation concluded that the 21 CFCU, one of two CFCUs in Train A, by itself, was sufficient to remove the post-accident containment heat load. The licensee concluded that the 21 CFCU constituted an operable train of containment cooling, declared containment cooling Train A operable, and exited TS LCO 3.0.3. The licensee completed repairs and returned the two CFCUs to operable status on February 12, 2005.

The inspectors concluded that the licensee's failure to place Unit 2 in Mode 3 and Mode 4 as required by TS LCO 3.0.3 was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the failure to comply with a TS-required shutdown could reasonably be viewed as a precursor to a significant event. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY IDENTIFY AND CORRECT CONDITIONS ADVERSE TO QUALITY ASSOCIATED WITH MULTIPLE 121 CRAH FAILURES.

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the 121 control room air handler. Specifically, the licensee failed to execute a comprehensive and systematic maintenance troubleshooting process as required by plant procedures. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the ineffective troubleshooting resulted in a failure to promptly identify and correct conditions adverse to quality and prevent recurrence of 121 CRAH failures. The licensee's ineffective troubleshooting efforts resulted in multiple performance failures of the safety-related control room ventilation system and several unplanned Technical Specification Limiting Condition for Operation entries. The licensee implemented corrective actions to revise the troubleshooting process to meet industry best practices and developed training on troubleshooting techniques.

The inspectors concluded that the licensee's failure to conduct troubleshooting activities in a comprehensive and systematic manner and was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because degraded and uncorrected conditions associated the 121 control room air handler could become a precursor to a more significant event. Since the finding only represented a degradation of the radiological barrier function provided for the control room, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY THAT IMPORTANT INFORMATION ASSOCIATED WITH LTOP DESIGN BASIS WAS NOT INCLUDED IN OPERABILITY EVALUATION

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the low temperature overpressure protection function of the pressurizer power operated relief valves. Specifically, the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer power operated relief valve cycles required to complete the low temperature overpressure protection function for a postulated mass injection event prior to the determination that the function remained operable. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer PORV cycles required to complete the LTOP function for a postulated mass injection event prior to the determination that the function remained operable. The licensee implemented corrective actions that included the identification of LTOP design basis requirements; establishment of new and more conservative LTOP design basis; and the development, installation, and testing of a recurring temporary modification.

The inspectors determined that a performance deficiency existed with the problem identification and resolution actions taken by the licensee during development and review of the operability recommendation. The finding was more than minor since it could be viewed as a precursor to a more significant event such as a failure of the reactor coolant system barrier integrity and affected the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide release caused by accidents and events, and was associated cornerstone attributes of reactor coolant system equipment and barrier performance. Since sufficient mitigating capabilities were maintained and no non-compliance with Technical Specifications were identified, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MISSED UT EXAMINATIONS FOR SG 12 AND SG 21 W-A WELDS

The inspectors identified a finding of very low safety significance regarding the licensee's failure to perform ultrasonic examinations on additional tubesheet-to-head welds in steam generators 12 and 21 following identification of indications on similar welds. The finding constituted a Non-Cited Violation of 10 CFR 50.55a(g)(4).

The inspectors determined that the finding was more than minor because it affected the barrier integrity cornerstone objective of maintaining the reactor coolant system barrier integrity and if left uncorrected, could allow unacceptable piping system weld flaws to remain in-service. The finding was of very low safety significance because the welds were subsequently ultrasonically examined and the affected welds did not have flaws greater than that allowed by the American Society of Mechanical Engineers Code.

Inspection Report# : [2004005\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 17, 2005

Prairie Island 2

2Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IDENTIFY AND REMOVE/SECURE POTENTIAL TORNADO MISSILE HAZARDS

The inspectors identified a plate of aluminum material unsecured on the south side of the fuel oil transfer house and an unsecured prestaged temporary storage tank in close proximity to the 2M, 2RX, and 2RY transformers. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire, or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2005004\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF TRANSIENT COMBUSTIBLES

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.48(a)(2)(I) associated with the licensee's storage of transient combustibles in the Unit 2 reactor building without required administrative controls.

The finding was more than minor because it affected the initiating events cornerstone of protection against external factors (fire), and if left uncorrected could have resulted in a greater probability of a fire. Plant personnel failed to identify these transient combustibles during the fire hazard review for work activities and housekeeping tours. The finding was determined to be of very low safety significance because it was in the category of fire prevention and administrative controls.

Inspection Report# : [2005004\(pdf\)](#)

Mitigating Systems

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

NON-CONSERVATIVE METHODOLOGY AND ASSUMPTIONS USED IN DESIGN CALCULATIONS

The inspector identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having a very low safety significance involving the licensee's failure to adequately apply design control measures to verify the adequacy of certain design calculations. These calculations provided the basis to ensure the safety injection (SI) system would be capable of injecting water into the reactor vessel to remove decay heat following a postulated reactor vessel closure head (RVCH) drop onto the reactor vessel flange. Specifically, non-conservative assumptions and a non-conservative design methodology were used without justification and the calculations did not include all of the structural components that would be affected by a reactor vessel head drop in the design evaluations that provided the basis for the maximum lift elevation allowed for the reactor vessel head removal and replacement during refueling operations.

This finding was greater than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events and if left uncorrected, it could become a more significant safety concern, in that the calculational deficiencies resulted in a non-conservative determination of maximum allowable head lift height. The finding was of very low safety significance because the polar crane capacity had considerable margin with respect to the original, lighter weight RVCH, and the issue was appropriately addressed prior to lifting of the heavier replacement RVCH.

Inspection Report# : [2005004\(pdf\)](#)

G**Significance:** Aug 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO NOTIFY THE NRC OF A CHANGE IN OPERATOR STATUS IN ACCORDANCE WITH 10 CFR 50.74(c)

The inspector identified a violation of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspector identified that the facility licensee failed to notify the NRC within 30 days after receiving a change in medical status of a licensed operator from the station's medical examiner. The change in medical status required conditioning the operator's license by the NRC.

Inspection Report# : [2004007\(pdf\)](#)

Barrier Integrity

G**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ULTRASONIC EXAMINATION PROCEDURE FOR THE REACTOR VESSEL FLANGE-TO-SHELL WELD

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.55a(g)(4) associated with the licensee's failure to specify an ultrasonic calibration block with appropriate calibration reflectors, that met the American Society of Mechanical Engineers Code in a procedure that performed examinations of the reactor vessel flange-to-shell welds.

This finding was greater than minor because it affected the barrier integrity cornerstone objective of reactor coolant system equipment and barrier performance, and if left uncorrected could have resulted in allowing unacceptable flaws to remain in-service and the licensee would have relied on an inadequate examination for credit toward completing the required code weld volumetric coverage. The finding was of very low safety significance because this inadequate procedure was identified prior to taking Code credit for this weld examination, and a separate Code qualified examination was conducted on the affected vessel weld.

Inspection Report# : [2005004\(pdf\)](#)**G****Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT PROMPT AND EFFECTIVE CORRECTIVE ACTIONS FOR REPETITIVE FAILURES OF CONTAINMENT FAN COIL UNITS

The inspectors identified a finding of very low safety significance for inadequate corrective actions associated with the repetitive failure of Unit 1 and 2 containment fan coil units (CFCUs). Specifically, the licensee failed to identify and correct the root cause of the accelerated erosion of the CFCUs and to implement effective corrective actions in a timely manner to preclude repeat failures of these significant conditions adverse to quality. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution (corrective actions) because the ineffective implementation of the licensee's corrective action program allowed the root cause of a Unit 1 fan coil unit failure in November 2001, to go unidentified and was not corrected. The licensee's inadequate corrective action has resulted in multiple performance failures of the safety-related containment cooling system and multiple unplanned Technical Specifications (TS) Limiting Condition for Operation (LCO) entries. The licensee has conducted a root cause evaluation, identified long-term corrective actions to prevent future failures, and has implemented short-term corrective actions to reduce the erosion rate until long-term corrective actions are fully implemented.

The inspectors concluded that the licensee's failure to identify the root cause of the fan coil unit accelerated erosion and implement effective corrective action to preclude recurrence was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the finding affected the barrier integrity cornerstone objective to provide reasonable assurance that the physical design barriers (the reactor containment) protect the public from radionuclide release from accidents or events. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)**G****Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET TECHNICAL SPECIFICATION 3.0.3 REQUIREMENTS

The inspectors identified a finding of very low safety significance for a failure to comply with the required actions of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.0.3. Specifically, the licensee failed to place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours of entry into TS LCO 3.0.3 after 2 CFCUs, each from opposite trains, were declared inoperable on February 11, 2005. This finding constituted a Non-Cited Violation of TS LCO 3.0.3. The inspectors determined that the finding impacted the cross-cutting area of

Human Performance (organization) because the licensee's management organization failed to carefully assess the situation regarding TS compliance. The licensee's decision to not place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours was based on a conclusion reached in an operability evaluation. That evaluation concluded that the 21 CFCU, one of two CFCUs in Train A, by itself, was sufficient to remove the post-accident containment heat load. The licensee concluded that the 21 CFCU constituted an operable train of containment cooling, declared containment cooling Train A operable, and exited TS LCO 3.0.3. The licensee completed repairs and returned the two CFCUs to operable status on February 12, 2005.

The inspectors concluded that the licensee's failure to place Unit 2 in Mode 3 and Mode 4 as required by TS LCO 3.0.3 was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the failure to comply with a TS-required shutdown could reasonably be viewed as a precursor to a significant event. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY IDENTIFY AND CORRECT CONDITIONS ADVERSE TO QUALITY ASSOCIATED WITH MULTIPLE 121 CRAH FAILURES.

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the 121 control room air handler. Specifically, the licensee failed to execute a comprehensive and systematic maintenance troubleshooting process as required by plant procedures. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the ineffective troubleshooting resulted in a failure to promptly identify and correct conditions adverse to quality and prevent recurrence of 121 CRAH failures. The licensee's ineffective troubleshooting efforts resulted in multiple performance failures of the safety-related control room ventilation system and several unplanned Technical Specification Limiting Condition for Operation entries. The licensee implemented corrective actions to revise the troubleshooting process to meet industry best practices and developed training on troubleshooting techniques.

The inspectors concluded that the licensee's failure to conduct troubleshooting activities in a comprehensive and systematic manner and was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because degraded and uncorrected conditions associated the 121 control room air handler could become a precursor to a more significant event. Since the finding only represented a degradation of the radiological barrier function provided for the control room, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY THAT IMPORTANT INFORMATION ASSOCIATED WITH LTOP DESIGN BASIS WAS NOT INCLUDED IN OPERABILITY EVALUATION

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the low temperature overpressure protection function of the pressurizer power operated relief valves. Specifically, the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer power operated relief valve cycles required to complete the low temperature overpressure protection function for a postulated mass injection event prior to the determination that the function remained operable. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer PORV cycles required to complete the LTOP function for a postulated mass injection event prior to the determination that the function remained operable. The licensee implemented corrective actions that included the identification of LTOP design basis requirements; establishment of new and more conservative LTOP design basis; and the development, installation, and testing of a recurring temporary modification.

The inspectors determined that a performance deficiency existed with the problem identification and resolution actions taken by the licensee during development and review of the operability recommendation. The finding was more than minor since it could be viewed as a precursor to a more significant event such as a failure of the reactor coolant system barrier integrity and affected the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide release caused by accidents and events, and was associated cornerstone attributes of reactor coolant system equipment and barrier performance. Since sufficient mitigating capabilities were maintained and no non-compliance with Technical Specifications were identified, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : August 24, 2005

Prairie Island 2

3Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IDENTIFY AND REMOVE/SECURE POTENTIAL TORNADO MISSILE HAZARDS

The inspectors identified a plate of aluminum material unsecured on the south side of the fuel oil transfer house and an unsecured prestaged temporary storage tank in close proximity to the 2M, 2RX, and 2RY transformers. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire, or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2005004\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF TRANSIENT COMBUSTIBLES

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.48(a)(2)(I) associated with the licensee's storage of transient combustibles in the Unit 2 reactor building without required administrative controls.

The finding was more than minor because it affected the initiating events cornerstone of protection against external factors (fire), and if left uncorrected could have resulted in a greater probability of a fire. Plant personnel failed to identify these transient combustibles during the fire hazard review for work activities and housekeeping tours. The finding was determined to be of very low safety significance because it was in the category of fire prevention and administrative controls.

Inspection Report# : [2005004\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR COOLING WATER PUMP DISCHARGE PIPING WALL THICKNESS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to implement nondestructive examinations on the discharge piping of the safety-related cooling water pumps to verify that the pipe wall had not been reduced below minimum design thickness.

This finding was more than minor because failure to monitor cooling water minimum pipe wall thickness could result in cooling water leakage or pipe rupture due to active corrosion and/or erosion processes present in the cooling water system. The finding was of very low safety significance because the licensee concluded that the piping systems were currently operable based on the absence of through-wall leakage and based upon the surface appearance of internal piping sections photographed during periodic pump discharge valve maintenance.

Inspection Report# : [2005008\(pdf\)](#)

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR THE 22 COMPONENT COOLING WATER HEAT EXCHANGER DIVIDER PLATE MODIFICATIONS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee failed to implement appropriate configuration and design controls associated with modifications made to the number 22 component cooling water (CC) heat exchanger (HX) divider plate. Specifically, the licensee failed to verify input of a key input assumption, apply appropriate acceptance criteria, and update drawings with the replacement divider plate material installed. As corrective actions, the licensee revised related modifications and calculations, and intends to examine CC HX welds during the next internal HX inspection.

This finding was more than minor because the number 22 CC HX divider plate was modified, returned to service, and operated outside design allowable limits due to excessive differential pressure. Sustained operation outside design allowable limits could have resulted in divider plate failure and loss of heat exchanger function. The finding was of very low safety significance because it was a design issue which did not result in loss of function per Generic Letter 91-18.

Inspection Report# : [2005008\(pdf\)](#)

G**Significance:** Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR LOSS OF MAKEUP RESERVE VOLUME AVAILABLE IN INTAKE CANAL

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to establish a test program to ensure that the design basis reserve makeup volume of cooling water for the ultimate heat sink contained in the intake canal was maintained. Specifically, the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment was not being tracked or evaluated.

This finding was more than minor because failure to monitor the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment could have resulted in an inadequate cooling water reserve volume to support a plant shutdown and cooldown following a loss of Lock and Dam No. 3. The finding was of very low safety significance because the licensee demonstrated that adequate reserve volume existed in the intake canal to support the 4-hour reserve volume described in the Updated Safety Analysis Report.

Inspection Report# : [2005008\(pdf\)](#)

G**Significance:** Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO UPDATE PRESSURE DROP CALCULATION FOR REPLACEMENT STEAM GENERATORS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize an increased pressure drop in the hydraulic characteristics between the new replacement steam generators (RSGs) and associated main steam safety valves. Specifically, Calculation ENG-ME-454, "Pressure Drop Between SG [steam generator] and Safety Valve," Revision 0, was not updated (i.e., revised) to evaluate the affects of the increased pressure drop associated with the RSGs. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043077 to revise the affected calculations.

The finding was more than minor because the failure to evaluate a change in pressure drop through the RSGs could have caused an adverse effect on the auxiliary feedwater (AFW) pump's flow delivery to the RSGs and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the increased pressure drop on the AFW system and did not represent an actual loss of a safety function.

(Section 1R21.1b.1)

Inspection Report# : [2005002\(pdf\)](#)

G**Significance:** Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO USE APPROPRIATE VORTEX METHODOLOGY FOR CST

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to select an appropriate method for calculating the onset of vortexing at the intake of the AFW suction lines from the condensate storage tank (CST). Specifically, Calculation ENG-ME-293, "Safety Related Tank Usable Volume Evaluation," Revision 3, used a method to determine the minimum height of water above the auxiliary feedwater (AFW) pump's intake to preclude vortex formation that was not appropriate. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043276 to revise the affected calculations.

The finding was more than minor because the failure to prevent the formation of vortexing at the intake of the AFW suction lines would result in air entrapment causing pulsating pump flow and/or reduction in pump performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate CST capacity remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.1b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO SPECIFY CORRECT MINIMUM PUMP OPERABILITY LIMITS FOR AFW SURVEILLANCE TESTING

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to correctly specify the minimum pump operability limits to be used in auxiliary feedwater (AFW) surveillance testing. Specifically, Calculation ENG-ME-576, "AFW Pump Minimum Acceptance Criteria - Proto Power Calculation 96-076, Revision B," Revision 0, did not include the bypass cooling flow to the turbine driven auxiliary feedwater pump (TDAFWP) turbine bearings and governor nor include the potential variability in the speed of the TDAFWP. This resulted in an AFW system hydraulic calculation that was non-conservative when determining the minimum acceptance criteria for the TDAFWP full flow test. Once identified, the licensee verified operability and entered the finding into their corrective action program (CAP) as CAP043273 to revise the test's acceptance criteria.

The finding was more than minor because the failure to account for bypass cooling flow and pump speed variation in the surveillance test acceptance criteria would result in over-predicting the AFW pump's performance (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin existed for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO VALIDATE HEAT-UP TRANSIENT DESIGN ANALYSIS ASSUMPTION FOR AFW PUMP ROOMS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to include the affects of increased initial room temperature and heat load addition due to turbine driven auxiliary feedwater pump (TDAFWP) steam leaks when evaluating the auxiliary feedwater (AFW) pump room's temperature on a loss of ventilation. Specifically, Calculation ENG-ME-182, "AFW Pump Room Ventilation System Design," Revision 0, assumed an initial nominal AFW pump room temperature that was not consistent with actual environmental conditions which resulted in a non-conservative heat-up transient design analysis. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043301 to revise the affected calculations.

The finding was more than minor because the failure to account for a higher initial room temperature and the potential steam leaks would result in a higher room temperature on a loss of ventilation causing equipment degradation due to the higher than anticipated ambient temperature and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's heat-up transient design analysis showed that adequate design margin remained for the increased temperature on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO INCLUDE AFW PUMP HEAT ENERGY TRANSFER IN LUBE OIL COOLER THERMAL PERFORMANCE ANALYSIS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize that the calculated design value for cooling water inlet temperature was higher than that assumed by the auxiliary feedwater (AFW) pump's lube oil cooler thermal performance analysis. Specifically, Calculation MECH-0268.4, "Verification of Heat Removal Capability of the American Standard Heat Exchanger, Model 02030-EF," Revision 0, used an assumed value for cooling water inlet temperature that did not include the AFW pump's heat energy transferred to the cooling water when calculating the lube oil cooler's operating temperature. This resulted in the lube oil cooler's thermal performance analysis being non-conservative. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043239 to revise the affected calculations.

The finding was more than minor because the failure to account for the AFW pump's heat energy transferred to the cooling water would result in a higher lube oil cooler operating temperature causing increased turbine bearing and governor degradation and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO MAINTAIN INSTRUMENTATION TUBING WATER SOLID

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to maintain the auxiliary feedwater (AFW) instrumentation tubing suction lines in a water solid condition to pressure switch 17704. The pressure switch performed a safety related function to sense low suction pressure and trip the 11 turbine driven auxiliary feedwater pump (TDAFWP) upon a low level condition in the condensate storage tank (CST). Specifically, a void was discovered in the safety related instrumentation tubing which lowered the effective setpoint for the 11 TDAFW pump's low suction pressure trip. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043298 to take corrective actions.

The finding was more than minor because the failure to prevent the formation of a void in the TDAFW pump's instrumentation tubing suction lines would result in air entrapment causing erroneous pressure switch performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the trip setpoint on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

NON-CONSERVATIVE METHODOLOGY AND ASSUMPTIONS USED IN DESIGN CALCULATIONS

The inspector identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having a very low safety significance involving the licensee's failure to adequately apply design control measures to verify the adequacy of certain design calculations. These calculations provided the basis to ensure the safety injection (SI) system would be capable of injecting water into the reactor vessel to remove decay heat following a postulated reactor vessel closure head (RVCH) drop onto the reactor vessel flange. Specifically, non-conservative assumptions and a non-conservative design methodology were used without justification and the calculations did not include all of the structural components that would be affected by a reactor vessel head drop in the design evaluations that provided the basis for the maximum lift elevation allowed for the reactor vessel head removal and replacement during refueling operations.

This finding was greater than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events and if left uncorrected, it could become a more significant safety concern, in that the calculational deficiencies resulted in a non-conservative determination of maximum allowable head lift height. The finding was of very low safety significance because the polar crane capacity had considerable margin with respect to the original, lighter weight RVCH, and the issue was appropriately addressed prior to lifting of the heavier replacement RVCH.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ULTRASONIC EXAMINATION PROCEDURE FOR THE REACTOR VESSEL FLANGE-TO-SHELL WELD

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.55a(g)(4) associated with the licensee's failure to specify an ultrasonic calibration block with appropriate calibration reflectors, that met the American Society of Mechanical Engineers Code in a procedure that performed examinations of the reactor vessel flange-to-shell welds.

This finding was greater than minor because it affected the barrier integrity cornerstone objective of reactor coolant system equipment and barrier performance, and if left uncorrected could have resulted in allowing unacceptable flaws to remain in-service and the licensee would have relied on an inadequate examination for credit toward completing the required code weld volumetric coverage. The finding was of very low safety significance because this inadequate procedure was identified prior to taking Code credit for this weld examination, and a separate Code qualified examination was conducted on the affected vessel weld.

Inspection Report# : [2005004\(pdf\)](#)

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT PROMPT AND EFFECTIVE CORRECTIVE ACTIONS FOR REPETITIVE FAILURES OF CONTAINMENT FAN COIL UNITS

The inspectors identified a finding of very low safety significance for inadequate corrective actions associated with the repetitive failure of Unit 1 and 2 containment fan coil units (CFCUs). Specifically, the licensee failed to identify and correct the root cause of the accelerated erosion of the CFCUs and to implement effective corrective actions in a timely manner to preclude repeat failures of these significant conditions adverse to quality. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary

cause of this finding was related to the cross-cutting area of Problem Identification and Resolution (corrective actions) because the ineffective implementation of the licensee's corrective action program allowed the root cause of a Unit 1 fan coil unit failure in November 2001, to go unidentified and was not corrected. The licensee's inadequate corrective action has resulted in multiple performance failures of the safety-related containment cooling system and multiple unplanned Technical Specifications (TS) Limiting Condition for Operation (LCO) entries. The licensee has conducted a root cause evaluation, identified long-term corrective actions to prevent future failures, and has implemented short-term corrective actions to reduce the erosion rate until long-term corrective actions are fully implemented.

The inspectors concluded that the licensee's failure to identify the root cause of the fan coil unit accelerated erosion and implement effective corrective action to preclude recurrence was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the finding affected the barrier integrity cornerstone objective to provide reasonable assurance that the physical design barriers (the reactor containment) protect the public from radionuclide release from accidents or events. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET TECHNICAL SPECIFICATION 3.0.3 REQUIREMENTS

The inspectors identified a finding of very low safety significance for a failure to comply with the required actions of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.0.3. Specifically, the licensee failed to place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours of entry into TS LCO 3.0.3 after 2 CFCUs, each from opposite trains, were declared inoperable on February 11, 2005. This finding constituted a Non-Cited Violation of TS LCO 3.0.3. The inspectors determined that the finding impacted the cross-cutting area of Human Performance (organization) because the licensee's management organization failed to carefully assess the situation regarding TS compliance. The licensee's decision to not place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours was based on a conclusion reached in an operability evaluation. That evaluation concluded that the 21 CFCU, one of two CFCUs in Train A, by itself, was sufficient to remove the post-accident containment heat load. The licensee concluded that the 21 CFCU constituted an operable train of containment cooling, declared containment cooling Train A operable, and exited TS LCO 3.0.3. The licensee completed repairs and returned the two CFCUs to operable status on February 12, 2005.

The inspectors concluded that the licensee's failure to place Unit 2 in Mode 3 and Mode 4 as required by TS LCO 3.0.3 was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the failure to comply with a TS-required shutdown could reasonably be viewed as a precursor to a significant event. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY IDENTIFY AND CORRECT CONDITIONS ADVERSE TO QUALITY ASSOCIATED WITH MULTIPLE 121 CRAH FAILURES.

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the 121 control room air handler. Specifically, the licensee failed to execute a comprehensive and systematic maintenance troubleshooting process as required by plant procedures. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the ineffective troubleshooting resulted in a failure to promptly identify and correct conditions adverse to quality and prevent recurrence of 121 CRAH failures. The licensee's ineffective troubleshooting efforts resulted in multiple performance failures of the safety-related control room ventilation system and several unplanned Technical Specification Limiting Condition for Operation entries. The licensee implemented corrective actions to revise the troubleshooting process to meet industry best practices and developed training on troubleshooting techniques.

The inspectors concluded that the licensee's failure to conduct troubleshooting activities in a comprehensive and systematic manner and was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because degraded and uncorrected conditions associated the 121 control room air handler could become a precursor to a more significant event. Since the finding only represented a degradation of the radiological barrier function provided for the control room, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY THAT IMPORTANT INFORMATION ASSOCIATED WITH LTOP DESIGN BASIS WAS NOT

INCLUDED IN OPERABILITY EVALUATION

An inspector identified finding of very low safety significance was identified for the licensee's failure to identify and promptly correct conditions adverse to quality associated with the low temperature overpressure protection function of the pressurizer power operated relief valves. Specifically, the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer power operated relief valve cycles required to complete the low temperature overpressure protection function for a postulated mass injection event prior to the determination that the function remained operable. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross cutting area of Problem Identification and Resolution because the licensee failed to recognize and correct a clear lack of understanding of the design basis for the 15 pressurizer PORV cycles required to complete the LTOP function for a postulated mass injection event prior to the determination that the function remained operable. The licensee implemented corrective actions that included the identification of LTOP design basis requirements; establishment of new and more conservative LTOP design basis; and the development, installation, and testing of a recurring temporary modification.

The inspectors determined that a performance deficiency existed with the problem identification and resolution actions taken by the licensee during development and review of the operability recommendation. The finding was more than minor since it could be viewed as a precursor to a more significant event such as a failure of the reactor coolant system barrier integrity and affected the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide release caused by accidents and events, and was associated cornerstone attributes of reactor coolant system equipment and barrier performance. Since sufficient mitigating capabilities were maintained and no non-compliance with Technical Specifications were identified, the finding was determined to be of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Aug 05, 2005

Identified By: NRC

Item Type: FIN Finding

PI&R INSPECTION SUMMARY

The team concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). There were some problems with program implementation, but these problems had been identified by the licensee and actions were underway to resolve them. The team noted a number of observations, including:

The initiation rate of issues entered into the CAP system has been relatively steady for the last two years. About half of the issues being entered were low priority items and were closed rapidly without further evaluation to actions taken, trending, or work orders being issued. This indicated that most issues, even minor ones, were being entered in the CAP.

The quality of apparent cause evaluations and root cause evaluations had improved in the last two years.

Trending of CAP data remained weak with essentially no improvement in the last two years despite the issue being identified by several organizations. Most of the electronic fields on the CAP documents useful for trending such as system, equipment number, process code, failure mode codes, and other predefined categories were not used in approximately 65 percent of the CAP items. The inspectors noted that most of the trends identified by the licensee in the last year had only been identified within the last two weeks through recent emphasis placed on

department roll up meetings. There was little evidence that any trends had been identified by electronic sorting of CAP items using the coded fields.

Corrective actions for several issues focused more on detecting inadequacies rather than preventing them. For example, the corrective actions relied on activities like management reviews, operator rounds and score sheets to catch the problems after they occurred, rather than preventing them from occurring in the first place.

Inspection Report# : [2005009\(pdf\)](#)

Last modified : November 30, 2005

Prairie Island 2

4Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IDENTIFY AND REMOVE/SECURE POTENTIAL TORNADO MISSILE HAZARDS

The inspectors identified a plate of aluminum material unsecured on the south side of the fuel oil transfer house and an unsecured prestaged temporary storage tank in close proximity to the 2M, 2RX, and 2RY transformers. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire, or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2005004\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF TRANSIENT COMBUSTIBLES

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.48(a)(2)(I) associated with the licensee's storage of transient combustibles in the Unit 2 reactor building without required administrative controls.

The finding was more than minor because it affected the initiating events cornerstone of protection against external factors (fire), and if left uncorrected could have resulted in a greater probability of a fire. Plant personnel failed to identify these transient combustibles during the fire hazard review for work activities and housekeeping tours. The finding was determined to be of very low safety significance because it was in the category of fire prevention and administrative controls.

Inspection Report# : [2005004\(pdf\)](#)

Mitigating Systems

Significance:  Nov 23, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Configuration Control Event Causes a Loss Fire Suppression to the Relay Room

The carbon dioxide suppression system isolation valve for the relay room had been mis-positioned in the closed position rendering the suppression system non-functional. This finding was related to the Personnel subcategory of the cross-cutting area of Human Performance. Operators failed to open the valve following a maintenance activity. Operators failed to identify that the valve was mis-positioned in the closed position during two subsequent valve position surveillance activities.

Inspection Report# : [2005012\(pdf\)](#)

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR COOLING WATER PUMP DISCHARGE PIPING WALL THICKNESS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to implement nondestructive examinations on the discharge piping of the safety-related cooling water pumps to

verify that the pipe wall had not been reduced below minimum design thickness.

This finding was more than minor because failure to monitor cooling water minimum pipe wall thickness could result in cooling water leakage or pipe rupture due to active corrosion and/or erosion processes present in the cooling water system. The finding was of very low safety significance because the licensee concluded that the piping systems were currently operable based on the absence of through-wall leakage and based upon the surface appearance of internal piping sections photographed during periodic pump discharge valve maintenance.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR THE 22 COMPONENT COOLING WATER HEAT EXCHANGER DIVIDER PLATE MODIFICATIONS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee failed to implement appropriate configuration and design controls associated with modifications made to the number 22 component cooling water (CC) heat exchanger (HX) divider plate. Specifically, the licensee failed to verify input of a key input assumption, apply appropriate acceptance criteria, and update drawings with the replacement divider plate material installed. As corrective actions, the licensee revised related modifications and calculations, and intends to examine CC HX welds during the next internal HX inspection.

This finding was more than minor because the number 22 CC HX divider plate was modified, returned to service, and operated outside design allowable limits due to excessive differential pressure. Sustained operation outside design allowable limits could have resulted in divider plate failure and loss of heat exchanger function. The finding was of very low safety significance because it was a design issue which did not result in loss of function per Generic Letter 91-18.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR LOSS OF MAKEUP RESERVE VOLUME AVAILABLE IN INTAKE CANAL

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to establish a test program to ensure that the design basis reserve makeup volume of cooling water for the ultimate heat sink contained in the intake canal was maintained. Specifically, the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment was not being tracked or evaluated.

This finding was more than minor because failure to monitor the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment could have resulted in an inadequate cooling water reserve volume to support a plant shutdown and cooldown following a loss of Lock and Dam No. 3. The finding was of very low safety significance because the licensee demonstrated that adequate reserve volume existed in the intake canal to support the 4-hour reserve volume described in the Updated Safety Analysis Report.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO UPDATE PRESSURE DROP CALCULATION FOR REPLACEMENT STEAM GENERATORS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize an increased pressure drop in the hydraulic characteristics between the new replacement steam generators (RSGs) and associated main steam safety valves. Specifically, Calculation ENG-ME-454, "Pressure Drop Between SG [steam generator] and Safety Valve," Revision 0, was not updated (i.e., revised) to evaluate the affects of the increased pressure drop associated with the RSGs. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043077 to revise the affected calculations.

The finding was more than minor because the failure to evaluate a change in pressure drop through the RSGs could have caused an adverse effect on the auxiliary feedwater (AFW) pump's flow delivery to the RSGs and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the increased pressure drop on the AFW system and did not represent an actual loss of a safety function.

(Section 1R21.1b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO USE APPROPRIATE VORTEX METHODOLOGY FOR CST

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to select an appropriate method for calculating the onset of vortexing at the intake of the AFW suction lines from the condensate storage tank (CST). Specifically, Calculation ENG-ME-293, "Safety Related Tank Usable Volume Evaluation," Revision 3, used a method to determine the minimum height of water above the auxiliary feedwater (AFW) pump's intake to preclude vortex formation that was not appropriate. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043276 to revise the affected calculations.

The finding was more than minor because the failure to prevent the formation of vortexing at the intake of the AFW suction lines would result in air entrapment causing pulsating pump flow and/or reduction in pump performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate CST capacity remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.1b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO SPECIFY CORRECT MINIMUM PUMP OPERABILITY LIMITS FOR AFW SURVEILLANCE TESTING

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to correctly specify the minimum pump operability limits to be used in auxiliary feedwater (AFW) surveillance testing. Specifically, Calculation ENG-ME-576, "AFW Pump Minimum Acceptance Criteria - Proto Power Calculation 96-076, Revision B," Revision 0, did not include the bypass cooling flow to the turbine driven auxiliary feedwater pump (TDAFWP) turbine bearings and governor nor include the potential variability in the speed of the TDAFWP. This resulted in an AFW system hydraulic calculation that was non-conservative when determining the minimum acceptance criteria for the TDAFWP full flow test. Once identified, the licensee verified operability and entered the finding into their corrective action program (CAP) as CAP043273 to revise the test's acceptance criteria.

The finding was more than minor because the failure to account for bypass cooling flow and pump speed variation in the surveillance test acceptance criteria would result in over-predicting the AFW pump's performance (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin existed for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO VALIDATE HEAT-UP TRANSIENT DESIGN ANALYSIS ASSUMPTION FOR AFW PUMP ROOMS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to include the affects of increased initial room temperature and heat load addition due to turbine driven auxiliary feedwater pump (TDAFWP) steam leaks when evaluating the auxiliary feedwater (AFW) pump room's temperature on a loss of ventilation. Specifically, Calculation ENG-ME-182, "AFW Pump Room Ventilation System Design," Revision 0, assumed an initial nominal AFW pump room temperature that was not consistent with actual environmental conditions which resulted in a non-conservative heat-up transient design analysis. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043301 to revise the affected calculations.

The finding was more than minor because the failure to account for a higher initial room temperature and the potential steam leaks would result in a higher room temperature on a loss of ventilation causing equipment degradation due to the higher than anticipated ambient temperature and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's heat-up transient design analysis showed that adequate design margin remained for the increased temperature on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO INCLUDE AFW PUMP HEAT ENERGY TRANSFER IN LUBE OIL COOLER THERMAL PERFORMANCE ANALYSIS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize that the calculated design value for cooling water inlet temperature was higher than that assumed by the auxiliary feedwater (AFW) pump's lube oil cooler thermal performance analysis. Specifically, Calculation MECH-0268.4, "Verification of Heat Removal Capability of the American Standard Heat Exchanger, Model 02030-EF," Revision 0, used an assumed value for cooling water inlet temperature that did not include the AFW pump's heat energy transferred to the cooling water when calculating the lube oil

cooler's operating temperature. This resulted in the lube oil cooler's thermal performance analysis being non-conservative. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043239 to revise the affected calculations.

The finding was more than minor because the failure to account for the AFW pump's heat energy transferred to the cooling water would result in a higher lube oil cooler operating temperature causing increased turbine bearing and governor degradation and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO MAINTAIN INSTRUMENTATION TUBING WATER SOLID

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to maintain the auxiliary feedwater (AFW) instrumentation tubing suction lines in a water solid condition to pressure switch 17704. The pressure switch performed a safety related function to sense low suction pressure and trip the 11 turbine driven auxiliary feedwater pump (TDAFWP) upon a low level condition in the condensate storage tank (CST). Specifically, a void was discovered in the safety related instrumentation tubing which lowered the effective setpoint for the 11 TDAFW pump's low suction pressure trip. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043298 to take corrective actions.

The finding was more than minor because the failure to prevent the formation of a void in the TDAFW pump's instrumentation tubing suction lines would result in air entrapment causing erroneous pressure switch performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the trip setpoint on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

NON-CONSERVATIVE METHODOLOGY AND ASSUMPTIONS USED IN DESIGN CALCULATIONS

The inspector identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having a very low safety significance involving the licensee's failure to adequately apply design control measures to verify the adequacy of certain design calculations. These calculations provided the basis to ensure the safety injection (SI) system would be capable of injecting water into the reactor vessel to remove decay heat following a postulated reactor vessel closure head (RVCH) drop onto the reactor vessel flange. Specifically, non-conservative assumptions and a non-conservative design methodology were used without justification and the calculations did not include all of the structural components that would be affected by a reactor vessel head drop in the design evaluations that provided the basis for the maximum lift elevation allowed for the reactor vessel head removal and replacement during refueling operations.

This finding was greater than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events and if left uncorrected, it could become a more significant safety concern, in that the calculational deficiencies resulted in a non-conservative determination of maximum allowable head lift height. The finding was of very low safety significance because the polar crane capacity had considerable margin with respect to the original, lighter weight RVCH, and the issue was appropriately addressed prior to lifting of the heavier replacement RVCH.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ULTRASONIC EXAMINATION PROCEDURE FOR THE REACTOR VESSEL FLANGE-TO-SHELL WELD

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.55a(g)(4) associated with the licensee's failure to specify an ultrasonic calibration block with appropriate calibration reflectors, that met the American Society of Mechanical Engineers Code in a procedure that performed examinations of the reactor vessel flange-to-shell welds.

This finding was greater than minor because it affected the barrier integrity cornerstone objective of reactor coolant system equipment and barrier performance, and if left uncorrected could have resulted in allowing unacceptable flaws to remain in-service and the licensee would have relied on an inadequate examination for credit toward completing the required code weld volumetric coverage. The finding was of very low safety significance because this inadequate procedure was identified prior to taking Code credit for this weld examination, and a separate Code qualified examination was conducted on the affected vessel weld.

Inspection Report# : [2005004\(pdf\)](#)

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT PROMPT AND EFFECTIVE CORRECTIVE ACTIONS FOR REPETITIVE FAILURES OF CONTAINMENT FAN COIL UNITS

The inspectors identified a finding of very low safety significance for inadequate corrective actions associated with the repetitive failure of Unit 1 and 2 containment fan coil units (CFCUs). Specifically, the licensee failed to identify and correct the root cause of the accelerated erosion of the CFCUs and to implement effective corrective actions in a timely manner to preclude repeat failures of these significant conditions adverse to quality. The finding constituted a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution (corrective actions) because the ineffective implementation of the licensee's corrective action program allowed the root cause of a Unit 1 fan coil unit failure in November 2001, to go unidentified and was not corrected. The licensee's inadequate corrective action has resulted in multiple performance failures of the safety-related containment cooling system and multiple unplanned Technical Specifications (TS) Limiting Condition for Operation (LCO) entries. The licensee has conducted a root cause evaluation, identified long-term corrective actions to prevent future failures, and has implemented short-term corrective actions to reduce the erosion rate until long-term corrective actions are fully implemented.

The inspectors concluded that the licensee's failure to identify the root cause of the fan coil unit accelerated erosion and implement effective corrective action to preclude recurrence was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the finding affected the barrier integrity cornerstone objective to provide reasonable assurance that the physical design barriers (the reactor containment) protect the public from radionuclide release from accidents or events. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

G

Significance: Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET TECHNICAL SPECIFICATION 3.0.3 REQUIREMENTS

The inspectors identified a finding of very low safety significance for a failure to comply with the required actions of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.0.3. Specifically, the licensee failed to place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours of entry into TS LCO 3.0.3 after 2 CFCUs, each from opposite trains, were declared inoperable on February 11, 2005. This finding constituted a Non-Cited Violation of TS LCO 3.0.3. The inspectors determined that the finding impacted the cross-cutting area of Human Performance (organization) because the licensee's management organization failed to carefully assess the situation regarding TS compliance. The licensee's decision to not place Unit 2 in Mode 3 within 7 hours and Mode 4 within 13 hours was based on a conclusion reached in an operability evaluation. That evaluation concluded that the 21 CFCU, one of two CFCUs in Train A, by itself, was sufficient to remove the post-accident containment heat load. The licensee concluded that the 21 CFCU constituted an operable train of containment cooling, declared containment cooling Train A operable, and exited TS LCO 3.0.3. The licensee completed repairs and returned the two CFCUs to operable status on February 12, 2005.

The inspectors concluded that the licensee's failure to place Unit 2 in Mode 3 and Mode 4 as required by TS LCO 3.0.3 was a performance deficiency that warranted significance evaluation. The inspectors determined the finding to be more than minor because the failure to comply with a TS-required shutdown could reasonably be viewed as a precursor to a significant event. The significance evaluation resulted in a finding of very low safety significance (Green) since the unavailability of the CFCUs did not adversely affect core damage frequency nor did it adversely affect the large early release frequency.

Inspection Report# : [2005003\(pdf\)](#)

Emergency Preparedness

Significance: TBD Dec 31, 2005

Identified By: NRC

Item Type: AV Apparent Violation

DEGRADED RISK-SIGNIFICANT PLANNING STANDARD

The inspectors identified an apparent violation having preliminarily low to moderate safety significance for a failure to maintain in effect emergency plans that meet the requirements specified in 10 CFR 50.54(q) and risk-significant planning standard 10 CFR 50.47(b)(4). Specifically, the establishment of a non-conservative emergency action level (EAL) classification process, as contained in Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," would potentially not have resulted in the licensee staff declaring a required Site Area Emergency under certain flooding conditions. This condition was initially identified as the result of a licensee evaluation that concluded transformers associated with each off-site power source to both the Unit 1 and 2 safety-related and non-safety-related 4 kilovolt buses had limiting elevations below 698 feet above mean sea level (MSL). The Updated Safety Analysis Report (USAR), Section 2.4.3.5, "Floods," stated

that the transformers will function when flooded to 698.0 feet above MSL. The entry conditions for the licensee's declaration of a Site Area Emergency at 698 feet above MSL were based on a river water level above which the functionality of site transformers can no longer be relied upon. The licensee initiated a corrective action to correct the USAR but failed to correct references to the 698 feet above MSL for the Site Area Emergency EAL in Prairie Island Emergency Plan Annex A, Condition 19, until this condition was identified by the inspectors. The licensee revised the EAL for a Site Area Emergency to an acceptable value of 695 feet above MSL and conducted a root cause evaluation to determine the causes that prevented timely correction following initial identification.

The inspectors determined the finding to be more than minor since the finding was associated with the procedure quality attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding significance was assessed using Inspection Manual Chapter (IMC) 0609, Appendix B, Emergency Preparedness SDP Sheet 1, "Failure To Comply," and the examples provided in Section 4.4. The inspectors concluded that the finding was associated with an EAL process that would potentially not have resulted in the licensee staff declaring a Site Area Emergency under certain flooding conditions. The finding was determined preliminarily to be of low to moderate safety significance (White). Additionally, the inspectors concluded that the licensee's failure to implement corrective action to revise the applicable EAL with an acceptable value as a cross-cutting finding associated with problem identification and resolution.

Inspection Report# : [2005011\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Aug 05, 2005

Identified By: NRC

Item Type: FIN Finding

PI&R INSPECTION SUMMARY

The team concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). There were some problems with program implementation, but these problems had been identified by the licensee and actions were underway to resolve them. The team noted a number of observations, including:

The initiation rate of issues entered into the CAP system has been relatively steady for the last two years. About half of the issues being entered were low priority items and were closed rapidly without further evaluation to actions taken, trending, or work orders being issued. This indicated that most issues, even minor ones, were being entered in the CAP.

The quality of apparent cause evaluations and root cause evaluations had improved in the last two years.

Trending of CAP data remained weak with essentially no improvement in the last two years despite the issue being identified by several organizations. Most of the electronic fields on the CAP documents useful for trending such as system, equipment number, process code, failure mode codes, and other predefined categories were not used in approximately 65 percent of the CAP items. The inspectors noted that most of the trends identified by the licensee in the last year had only been identified within the last two weeks through recent emphasis placed on department roll up meetings. There was little evidence that any trends had been identified by electronic sorting of CAP items using the coded fields.

Corrective actions for several issues focused more on detecting inadequacies rather than preventing them. For example, the corrective actions relied on activities like management reviews, operator rounds and score sheets to catch the problems after they occurred, rather than preventing them from occurring in the first place.

Inspection Report# : [2005009\(pdf\)](#)

Last modified : March 03, 2006

Prairie Island 2

1Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IDENTIFY AND REMOVE/SECURE POTENTIAL TORNADO MISSILE HAZARDS

The inspectors identified a plate of aluminum material unsecured on the south side of the fuel oil transfer house and an unsecured prestaged temporary storage tank in close proximity to the 2M, 2RX, and 2RY transformers. Plant personnel failed to identify these discrepant conditions during the performance of a plant surveillance procedure with the purpose of identifying and removing potential missile hazards from areas where they could damage important plant electrical equipment during adverse weather conditions.

The finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone designed to limit the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance since the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, nor did it contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and the finding did not increase the likelihood of a fire, or internal or external flooding. The inspectors determined that no violation of NRC requirements were associated with this finding.

Inspection Report# : [2005004\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF TRANSIENT COMBUSTIBLES

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.48(a)(2)(I) associated with the licensee's storage of transient combustibles in the Unit 2 reactor building without required administrative controls.

The finding was more than minor because it affected the initiating events cornerstone of protection against external factors (fire), and if left uncorrected could have resulted in a greater probability of a fire. Plant personnel failed to identify these transient combustibles during the fire hazard review for work activities and housekeeping tours. The finding was determined to be of very low safety significance because it was in the category of fire prevention and administrative controls.

Inspection Report# : [2005004\(pdf\)](#)

Mitigating Systems

Significance:  Mar 24, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Consider Adverse Ampacity Effects of High Temperature Conditions in the Auxiliary Feedwater Pump Rooms

A Non-Cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance was identified by the inspectors. Specifically, the licensee had not evaluated and updated the associated plant cable ampacity calculation to determine the potential consequences of adverse effects to cabling due to higher temperatures in the auxiliary feedwater (AFW) pump rooms and other auxiliary building areas. After identification by the inspectors, the licensee was able to demonstrate that even though the higher temperatures decreased the ampacity margins for the affected cabling, it did not decrease the margins to the limit where the cabling would fail if called upon to provide power to equipment important to safety.

The finding was more than minor because it affected the mitigating system cornerstone objective to ensure the availability, reliability, and capability of systems that mitigate transients and accidents, and if left uncorrected, the finding could become a more significant safety concern. Specifically, if left uncorrected, the licensee may not account for high temperature conditions in plant areas that could adversely affect the ampacity of cabling that supply power to equipment important to safety. This finding was of very low safety significance because, the licensee's preliminary evaluation determined that the higher temperatures in the AFW pump rooms and other auxiliary building areas would not prevent equipment important to safety from functioning.

Inspection Report# : [2006006\(pdf\)](#)

G**Significance:** Nov 23, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Configuration Control Event Causes a Loss Fire Suppression to the Relay Room

The carbon dioxide suppression system isolation valve for the relay room had been mis-positioned in the closed position rendering the suppression system non-functional. This finding was related to the Personnel subcategory of the cross-cutting area of Human Performance. Operators failed to open the valve following a maintenance activity. Operators failed to identify that the valve was mis-positioned in the closed position during two subsequent valve position surveillance activities.

Inspection Report# : [2005012\(pdf\)](#)G**Significance:** Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR COOLING WATER PUMP DISCHARGE PIPING WALL THICKNESS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to implement nondestructive examinations on the discharge piping of the safety-related cooling water pumps to verify that the pipe wall had not been reduced below minimum design thickness.

This finding was more than minor because failure to monitor cooling water minimum pipe wall thickness could result in cooling water leakage or pipe rupture due to active corrosion and/or erosion processes present in the cooling water system. The finding was of very low safety significance because the licensee concluded that the piping systems were currently operable based on the absence of through-wall leakage and based upon the surface appearance of internal piping sections photographed during periodic pump discharge valve maintenance.

Inspection Report# : [2005008\(pdf\)](#)G**Significance:** Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR THE 22 COMPONENT COOLING WATER HEAT EXCHANGER DIVIDER PLATE MODIFICATIONS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee failed to implement appropriate configuration and design controls associated with modifications made to the number 22 component cooling water (CC) heat exchanger (HX) divider plate. Specifically, the licensee failed to verify input of a key input assumption, apply appropriate acceptance criteria, and update drawings with the replacement divider plate material installed. As corrective actions, the licensee revised related modifications and calculations, and intends to examine CC HX welds during the next internal HX inspection.

This finding was more than minor because the number 22 CC HX divider plate was modified, returned to service, and operated outside design allowable limits due to excessive differential pressure. Sustained operation outside design allowable limits could have resulted in divider plate failure and loss of heat exchanger function. The finding was of very low safety significance because it was a design issue which did not result in loss of function per Generic Letter 91-18.

Inspection Report# : [2005008\(pdf\)](#)G**Significance:** Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR LOSS OF MAKEUP RESERVE VOLUME AVAILABLE IN INTAKE CANAL

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to establish a test program to ensure that the design basis reserve makeup volume of cooling water for the ultimate heat sink contained in the intake canal was maintained. Specifically, the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment was not being tracked or evaluated.

This finding was more than minor because failure to monitor the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment could have resulted in an inadequate cooling water reserve volume to support a plant shutdown and cooldown following a loss of Lock and Dam No. 3. The finding was of very low safety significance because the licensee demonstrated that adequate reserve volume existed in the intake canal to support the 4-hour reserve volume described in the Updated Safety Analysis Report.

Inspection Report# : [2005008\(pdf\)](#)G**Significance:** Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO UPDATE PRESSURE DROP CALCULATION FOR REPLACEMENT STEAM GENERATORS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize an increased pressure drop in the hydraulic characteristics between the new replacement steam generators (RSGs) and associated main steam safety valves. Specifically, Calculation ENG-ME-454, "Pressure Drop Between SG [steam generator] and Safety Valve," Revision 0, was not updated (i.e., revised) to evaluate the affects of the increased pressure drop associated with the RSGs. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043077 to revise the affected calculations.

The finding was more than minor because the failure to evaluate a change in pressure drop through the RSGs could have caused an adverse effect on the auxiliary feedwater (AFW) pump's flow delivery to the RSGs and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the increased pressure drop on the AFW system and did not represent an actual loss of a safety function.

(Section 1R21.1b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO USE APPROPRIATE VORTEX METHODOLOGY FOR CST

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to select an appropriate method for calculating the onset of vortexing at the intake of the AFW suction lines from the condensate storage tank (CST). Specifically, Calculation ENG-ME-293, "Safety Related Tank Usable Volume Evaluation," Revision 3, used a method to determine the minimum height of water above the auxiliary feedwater (AFW) pump's intake to preclude vortex formation that was not appropriate. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043276 to revise the affected calculations.

The finding was more than minor because the failure to prevent the formation of vortexing at the intake of the AFW suction lines would result in air entrapment causing pulsating pump flow and/or reduction in pump performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate CST capacity remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.1b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO SPECIFY CORRECT MINIMUM PUMP OPERABILITY LIMITS FOR AFW SURVEILLANCE TESTING

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to correctly specify the minimum pump operability limits to be used in auxiliary feedwater (AFW) surveillance testing. Specifically, Calculation ENG-ME-576, "AFW Pump Minimum Acceptance Criteria - Proto Power Calculation 96-076, Revision B," Revision 0, did not include the bypass cooling flow to the turbine driven auxiliary feedwater pump (TDAFWP) turbine bearings and governor nor include the potential variability in the speed of the TDAFWP. This resulted in an AFW system hydraulic calculation that was non-conservative when determining the minimum acceptance criteria for the TDAFWP full flow test. Once identified, the licensee verified operability and entered the finding into their corrective action program (CAP) as CAP043273 to revise the test's acceptance criteria.

The finding was more than minor because the failure to account for bypass cooling flow and pump speed variation in the surveillance test acceptance criteria would result in over-predicting the AFW pump's performance (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin existed for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO VALIDATE HEAT-UP TRANSIENT DESIGN ANALYSIS ASSUMPTION FOR AFW PUMP ROOMS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to include the affects of increased initial room temperature and heat load addition due to turbine driven auxiliary feedwater pump (TDAFWP) steam leaks when evaluating the auxiliary feedwater (AFW) pump room's temperature on a loss of ventilation. Specifically, Calculation ENG-ME-182, "AFW Pump Room Ventilation System Design," Revision 0, assumed an initial nominal AFW pump room temperature that was not consistent with actual environmental conditions which resulted in a non-conservative heat-up transient design analysis. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043301 to revise the affected calculations.

The finding was more than minor because the failure to account for a higher initial room temperature and the potential steam leaks would result in a higher room temperature on a loss of ventilation causing equipment degradation due to the higher than anticipated ambient temperature and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's heat-up transient design analysis showed that adequate design margin remained for the increased temperature on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO INCLUDE AFW PUMP HEAT ENERGY TRANSFER IN LUBE OIL COOLER THERMAL PERFORMANCE ANALYSIS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize that the calculated design value for cooling water inlet temperature was higher than that assumed by the auxiliary feedwater (AFW) pump's lube oil cooler thermal performance analysis. Specifically, Calculation MECH-0268.4, "Verification of Heat Removal Capability of the American Standard Heat Exchanger, Model 02030-EF," Revision 0, used an assumed value for cooling water inlet temperature that did not include the AFW pump's heat energy transferred to the cooling water when calculating the lube oil cooler's operating temperature. This resulted in the lube oil cooler's thermal performance analysis being non-conservative. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043239 to revise the affected calculations.

The finding was more than minor because the failure to account for the AFW pump's heat energy transferred to the cooling water would result in a higher lube oil cooler operating temperature causing increased turbine bearing and governor degradation and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO MAINTAIN INSTRUMENTATION TUBING WATER SOLID

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to maintain the auxiliary feedwater (AFW) instrumentation tubing suction lines in a water solid condition to pressure switch 17704. The pressure switch performed a safety related function to sense low suction pressure and trip the 11 turbine driven auxiliary feedwater pump (TDAFWP) upon a low level condition in the condensate storage tank (CST). Specifically, a void was discovered in the safety related instrumentation tubing which lowered the effective setpoint for the 11 TDAFW pump's low suction pressure trip. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043298 to take corrective actions.

The finding was more than minor because the failure to prevent the formation of a void in the TDAFW pump's instrumentation tubing suction lines would result in air entrapment causing erroneous pressure switch performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the trip setpoint on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.2)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

NON-CONSERVATIVE METHODOLOGY AND ASSUMPTIONS USED IN DESIGN CALCULATIONS

The inspector identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having a very low safety significance involving the licensee's failure to adequately apply design control measures to verify the adequacy of certain design calculations. These calculations provided the basis to ensure the safety injection (SI) system would be capable of injecting water into the reactor vessel to remove decay heat following a postulated reactor vessel closure head (RVCH) drop onto the reactor vessel flange. Specifically, non-conservative assumptions and a non-conservative design methodology were used without justification and the calculations did not include all of the structural components that would be affected by a reactor vessel head drop in the design evaluations that provided the basis for the maximum lift elevation allowed for the reactor vessel head removal and replacement during refueling operations.

This finding was greater than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events and if left uncorrected, it could become a more significant safety concern, in that the calculational deficiencies resulted in a non-conservative determination of maximum allowable head lift height. The finding was of very low safety significance because the polar crane capacity had considerable margin with respect to the original, lighter weight RVCH, and the issue was appropriately addressed prior to lifting of the heavier replacement RVCH.

Inspection Report# : [2005004\(pdf\)](#)

Barrier Integrity

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ULTRASONIC EXAMINATION PROCEDURE FOR THE REACTOR VESSEL FLANGE-TO-SHELL WELD

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.55a(g)(4) associated with the licensee's failure to specify an ultrasonic calibration block with appropriate calibration reflectors, that met the American Society of Mechanical Engineers Code in a procedure that performed examinations of the reactor vessel flange-to-shell welds.

This finding was greater than minor because it affected the barrier integrity cornerstone objective of reactor coolant system equipment and barrier performance, and if left uncorrected could have resulted in allowing unacceptable flaws to remain in-service and the licensee would have relied on an inadequate examination for credit toward completing the required code weld volumetric coverage. The finding was of very low safety significance because this inadequate procedure was identified prior to taking Code credit for this weld examination, and a separate Code qualified examination was conducted on the affected vessel weld.

Inspection Report# : [2005004\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Aug 05, 2005

Identified By: NRC

Item Type: FIN Finding

PI&R INSPECTION SUMMARY

The team concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). There were some problems with program implementation, but these problems had been identified by the licensee and actions were underway to resolve them. The team noted a number of observations, including:

The initiation rate of issues entered into the CAP system has been relatively steady for the last two years. About half of the issues being entered were low priority items and were closed rapidly without further evaluation to actions taken, trending, or work orders being issued. This indicated that most issues, even minor ones, were being entered in the CAP.

The quality of apparent cause evaluations and root cause evaluations had improved in the last two years.

Trending of CAP data remained weak with essentially no improvement in the last two years despite the issue being identified by several organizations. Most of the electronic fields on the CAP documents useful for trending such as system, equipment number, process code, failure mode codes, and other predefined categories were not used in approximately 65 percent of the CAP items. The inspectors noted that most of

the trends identified by the licensee in the last year had only been identified within the last two weeks through recent emphasis placed on department roll up meetings. There was little evidence that any trends had been identified by electronic sorting of CAP items using the coded fields.

Corrective actions for several issues focused more on detecting inadequacies rather than preventing them. For example, the corrective actions relied on activities like management reviews, operator rounds and score sheets to catch the problems after they occurred, rather than preventing them from occurring in the first place.

Inspection Report# : [2005009\(pdf\)](#)

Last modified : May 25, 2006

Prairie Island 2

2Q/2006 Plant Inspection Findings

Initiating Events



Significance: Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

EVALUATION OF EXPIRED SEALANT PERFORMANCE FOR FLOOD PROTECTION

Inspection Report# : [2006002\(pdf\)](#)

Inspection Report# : [2006003\(pdf\)](#)

Mitigating Systems



Significance: Mar 24, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Consider Adverse Ampacity Effects of High Temperature Conditions in the Auxiliary Feedwater Pump Rooms

A Non-Cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance was identified by the inspectors. Specifically, the licensee had not evaluated and updated the associated plant cable ampacity calculation to determine the potential consequences of adverse effects to cabling due to higher temperatures in the auxiliary feedwater (AFW) pump rooms and other auxiliary building areas. After identification by the inspectors, the licensee was able to demonstrate that even though the higher temperatures decreased the ampacity margins for the affected cabling, it did not decrease the margins to the limit where the cabling would fail if called upon to provide power to equipment important to safety.

The finding was more than minor because it affected the mitigating system cornerstone objective to ensure the availability, reliability, and capability of systems that mitigate transients and accidents, and if left uncorrected, the finding could become a more significant safety concern. Specifically, if left uncorrected, the licensee may not account for high temperature conditions in plant areas that could adversely affect the ampacity of cabling that supply power to equipment important to safety. This finding was of very low safety significance because, the licensee's preliminary evaluation determined that the higher temperatures in the AFW pump rooms and other auxiliary building areas would not prevent equipment important to safety from functioning.

Inspection Report# : [2006006\(pdf\)](#)



Significance: Nov 23, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Configuration Control Event Causes a Loss Fire Suppression to the Relay Room

The carbon dioxide suppression system isolation valve for the relay room had been mis-positioned in the closed position rendering the suppression system non-functional. This finding was related to the Personnel subcategory of the cross-cutting area of Human Performance. Operators failed to open the valve following a maintenance activity. Operators failed to identify that the valve was mis-positioned in the closed position during two subsequent valve position surveillance activities.

Inspection Report# : [2005012\(pdf\)](#)



Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR COOLING WATER PUMP DISCHARGE PIPING WALL THICKNESS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to implement nondestructive examinations on the discharge piping of the safety-related cooling water pumps to verify that the pipe wall had not been reduced below minimum design thickness.

This finding was more than minor because failure to monitor cooling water minimum pipe wall thickness could result in cooling water leakage or pipe rupture due to active corrosion and/or erosion processes present in the cooling water system. The finding was of very low safety significance

because the licensee concluded that the piping systems were currently operable based on the absence of through-wall leakage and based upon the surface appearance of internal piping sections photographed during periodic pump discharge valve maintenance.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR THE 22 COMPONENT COOLING WATER HEAT EXCHANGER DIVIDER PLATE MODIFICATIONS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee failed to implement appropriate configuration and design controls associated with modifications made to the number 22 component cooling water (CC) heat exchanger (HX) divider plate. Specifically, the licensee failed to verify input of a key input assumption, apply appropriate acceptance criteria, and update drawings with the replacement divider plate material installed. As corrective actions, the licensee revised related modifications and calculations, and intends to examine CC HX welds during the next internal HX inspection.

This finding was more than minor because the number 22 CC HX divider plate was modified, returned to service, and operated outside design allowable limits due to excessive differential pressure. Sustained operation outside design allowable limits could have resulted in divider plate failure and loss of heat exchanger function. The finding was of very low safety significance because it was a design issue which did not result in loss of function per Generic Letter 91-18.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MONITOR LOSS OF MAKEUP RESERVE VOLUME AVAILABLE IN INTAKE CANAL

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The licensee failed to establish a test program to ensure that the design basis reserve makeup volume of cooling water for the ultimate heat sink contained in the intake canal was maintained. Specifically, the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment was not being tracked or evaluated.

This finding was more than minor because failure to monitor the loss of reserve volume available in the intake canal due to accumulation/buildup of sediment could have resulted in an inadequate cooling water reserve volume to support a plant shutdown and cooldown following a loss of Lock and Dam No. 3. The finding was of very low safety significance because the licensee demonstrated that adequate reserve volume existed in the intake canal to support the 4-hour reserve volume described in the Updated Safety Analysis Report.

Inspection Report# : [2005008\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO UPDATE PRESSURE DROP CALCULATION FOR REPLACEMENT STEAM GENERATORS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize an increased pressure drop in the hydraulic characteristics between the new replacement steam generators (RSGs) and associated main steam safety valves. Specifically, Calculation ENG-ME-454, "Pressure Drop Between SG [steam generator] and Safety Valve," Revision 0, was not updated (i.e., revised) to evaluate the affects of the increased pressure drop associated with the RSGs. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043077 to revise the affected calculations.

The finding was more than minor because the failure to evaluate a change in pressure drop through the RSGs could have caused an adverse effect on the auxiliary feedwater (AFW) pump's flow delivery to the RSGs and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the increased pressure drop on the AFW system and did not represent an actual loss of a safety function.

(Section 1R21.1b.1)

Inspection Report# : [2005002\(pdf\)](#)

G

Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO USE APPROPRIATE VORTEX METHODOLOGY FOR CST

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to select an appropriate method for calculating the onset of vortexing at the intake of the AFW suction lines from the condensate storage tank (CST). Specifically, Calculation ENG-ME-293, "Safety Related Tank Usable Volume Evaluation," Revision

3, used a method to determine the minimum height of water above the auxiliary feedwater (AFW) pump's intake to preclude vortex formation that was not appropriate. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043276 to revise the affected calculations.

The finding was more than minor because the failure to prevent the formation of vortexing at the intake of the AFW suction lines would result in air entrapment causing pulsating pump flow and/or reduction in pump performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate CST capacity remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.1b.2)

Inspection Report# : [2005002\(pdf\)](#)



Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO SPECIFY CORRECT MINIMUM PUMP OPERABILITY LIMITS FOR AFW SURVEILLANCE TESTING

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to correctly specify the minimum pump operability limits to be used in auxiliary feedwater (AFW) surveillance testing. Specifically, Calculation ENG-ME-576, "AFW Pump Minimum Acceptance Criteria - Proto Power Calculation 96-076, Revision B," Revision 0, did not include the bypass cooling flow to the turbine driven auxiliary feedwater pump (TDAFWP) turbine bearings and governor nor include the potential variability in the speed of the TDAFWP. This resulted in an AFW system hydraulic calculation that was non-conservative when determining the minimum acceptance criteria for the TDAFWP full flow test. Once identified, the licensee verified operability and entered the finding into their corrective action program (CAP) as CAP043273 to revise the test's acceptance criteria.

The finding was more than minor because the failure to account for bypass cooling flow and pump speed variation in the surveillance test acceptance criteria would result in over-predicting the AFW pump's performance (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin existed for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.1)

Inspection Report# : [2005002\(pdf\)](#)



Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO VALIDATE HEAT-UP TRANSIENT DESIGN ANALYSIS ASSUMPTION FOR AFW PUMP ROOMS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to include the affects of increased initial room temperature and heat load addition due to turbine driven auxiliary feedwater pump (TDAFWP) steam leaks when evaluating the auxiliary feedwater (AFW) pump room's temperature on a loss of ventilation. Specifically, Calculation ENG-ME-182, "AFW Pump Room Ventilation System Design," Revision 0, assumed an initial nominal AFW pump room temperature that was not consistent with actual environmental conditions which resulted in a non-conservative heat-up transient design analysis. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043301 to revise the affected calculations.

The finding was more than minor because the failure to account for a higher initial room temperature and the potential steam leaks would result in a higher room temperature on a loss of ventilation causing equipment degradation due to the higher than anticipated ambient temperature and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's heat-up transient design analysis showed that adequate design margin remained for the increased temperature on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.2b.2)

Inspection Report# : [2005002\(pdf\)](#)



Significance: Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO INCLUDE AFW PUMP HEAT ENERGY TRANSFER IN LUBE OIL COOLER THERMAL PERFORMANCE ANALYSIS

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to recognize that the calculated design value for cooling water inlet temperature was higher than that assumed by the auxiliary feedwater (AFW) pump's lube oil cooler thermal performance analysis. Specifically, Calculation MECH-0268.4, "Verification of Heat Removal Capability of the American Standard Heat Exchanger, Model 02030-EF," Revision 0, used an assumed value for cooling water inlet temperature that did not include the AFW pump's heat energy transferred to the cooling water when calculating the lube oil cooler's operating temperature. This resulted in the lube oil cooler's thermal performance analysis being non-conservative. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043239 to revise the affected calculations.

The finding was more than minor because the failure to account for the AFW pump's heat energy transferred to the cooling water would result in a higher lube oil cooler operating temperature causing increased turbine bearing and governor degradation and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.1)

Inspection Report# : [2005002\(pdf\)](#)

G**Significance:** Jul 01, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

FAILED TO MAINTAIN INSTRUMENTATION TUBING WATER SOLID

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requirements. The licensee failed to maintain the auxiliary feedwater (AFW) instrumentation tubing suction lines in a water solid condition to pressure switch 17704. The pressure switch performed a safety related function to sense low suction pressure and trip the 11 turbine driven auxiliary feedwater pump (TDAFWP) upon a low level condition in the condensate storage tank (CST). Specifically, a void was discovered in the safety related instrumentation tubing which lowered the effective setpoint for the 11 TDAFW pump's low suction pressure trip. Once identified, the licensee entered the finding into their corrective action program (CAP) as CAP043298 to take corrective actions.

The finding was more than minor because the failure to prevent the formation of a void in the TDAFW pump's instrumentation tubing suction lines would result in air entrapment causing erroneous pressure switch performance and could have affected the mitigating systems cornerstone objective. The finding was of very low safety significance because the licensee's analysis showed that adequate design margin remained for the trip setpoint on the AFW system and did not represent an actual loss of a safety function. (Section 1R21.3b.2)

Inspection Report# : [2005002\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Aug 05, 2005

Identified By: NRC

Item Type: FIN Finding

PI&R INSPECTION SUMMARY

The team concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). There were some problems with program implementation, but these problems had been identified by the licensee and actions were underway to resolve them. The team noted a number of observations, including:

The initiation rate of issues entered into the CAP system has been relatively steady for the last two years. About half of the issues being entered were low priority items and were closed rapidly without further evaluation to actions taken, trending, or work orders being issued. This indicated that most issues, even minor ones, were being entered in the CAP.

The quality of apparent cause evaluations and root cause evaluations had improved in the last two years.

Trending of CAP data remained weak with essentially no improvement in the last two years despite the issue being identified by several organizations. Most of the electronic fields on the CAP documents useful for trending such as system, equipment number, process code, failure

mode codes, and other predefined categories were not used in approximately 65 percent of the CAP items. The inspectors noted that most of the trends identified by the licensee in the last year had only been identified within the last two weeks through recent emphasis placed on department roll up meetings. There was little evidence that any trends had been identified by electronic sorting of CAP items using the coded fields.

Corrective actions for several issues focused more on detecting inadequacies rather than preventing them. For example, the corrective actions relied on activities like management reviews, operator rounds and score sheets to catch the problems after they occurred, rather than preventing them from occurring in the first place.

Inspection Report# : [2005009\(pdf\)](#)

Last modified : August 25, 2006

Prairie Island 2

3Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR EXTERNAL FLOODING (EVALUATION OF EXPIRED SEALANT PERFORMANCE FOR FLOOD PROTECTION)

The inspectors identified a Non-Cited Violation of 10 CFR Part 50 Appendix B, Criterion V for a combination of an inadequate procedure and a failure to implement the requirements of Surveillance Procedure 1293, Inspection of Flood Control Measures and the Shelf Life Program Procedure FP-SC-PE-05. Specifically, the licensee failed to order and maintain the correct type of Deck-O-Seal sealant to facilitate installation of flood doors and panels in accordance with plant abnormal procedures.

The finding was more than minor because it closely matched example 2E of Inspection Manual Chapter 0612, Appendix E. The inspectors determined the finding to be of very low safety significance following a review of a licensee's condition evaluation concluding that the finding did not increase the likelihood of the external flooding event affecting plant safety-related systems or components.

Inspection Report# : [2006002\(pdf\)](#)

Inspection Report# : [2006003\(pdf\)](#)

Mitigating Systems

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

No Fire-Rated Damper in Return Ventilation Duct

The inspectors identified a NCV of the Prairie Island Nuclear Generating Plant's (PINGP's) Facility Operating License, Section 2.C.(4) and 10 CFR 50.48(b)(1)(I) having very low safety significance for not having a three-hour fire-rated damper installed between the AFW pump room (Fire Area 31) and the 480 Volt normal switchgear room (Fire Area 37). In the licensee's safety evaluation report (SER) dated September 6, 1979, in Section 5.10.6, the NRC stated that all ventilation return ducts that penetrate room boundaries will have fire-rated dampers (three-hour or equivalent) installed. This finding was entered into the licensee's CAP as 01044959, "SER Committed Damper Not Installed in AFWP Return Duct," dated August 17, 2006, to resolve and initiate appropriate corrective actions. In addition, the licensee established compensatory measures (i.e., an hourly fire watch).

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. The failure to have a three-hour fire-rated damper installed in the ventilation's return duct could allow the propagation of a fire that could impact the ability of the plant to achieve and maintain SSD. This finding was determined to be of very low safety significance based on the availability of SSD systems and because other defense-in-depth fire protection elements remained unaffected. (Section 1R05.3b.1)

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Surveillance Did Not Include TS Requirements

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include required instructions in a surveillance procedure. Specifically, the licensee failed to include the technical specification (TS) requirements in Surveillance Procedure (SP)-1266 "Fire Damper - 18-Month Inspection," dated June 2, 2004, to ensure that administrative controls were in place when opening the control room special ventilation system doors to inspect the fire dampers. This finding was entered into the licensee's CAP, the licensee also initiated procedure change request PCR01042837 to revise SP-1266 to reference the TS requirements.

This finding was more than minor because it could have become a more significant safety concern if the fire dampers inspection procedure was not revised to include appropriate administrative controls. Specifically, control room habitability could have been adversely affected if the ventilation duct access panel was not immediately closed during an event that could have resulted in smoke or toxic gas entry into the control room. This finding was determined to be of very low safety significance by an SDP Phase 3 evaluation.

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Smoke Detectors

The inspectors identified a NCV of the PINGP's Facility Operating License having very low safety significance for the failure to have adequate fire detection installed in accordance with the applicable NFPA codes. Specifically, the licensee failed to install detectors in beam pockets at the mezzanine areas located in the AFW pump rooms (Fire Areas 31 and 32). The inspectors determined that the cause of this finding was related to the self- and independent assessments aspect of the problem identification and resolution (PI and R) cross-cutting area because, in July of 2006, the licensee failed to identify the lack of detectors in the mezzanine areas during their evaluation of the NFPA 72E code compliance deviations for Fire Areas 31 and 32. This finding was entered into the licensee's CAP to evaluate the existing configuration in order to either justify the existing configuration as-is or implement a modification to correct the deficiency.

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. As a result of not having an adequate number of detectors, detection of a fire at these locations (i.e., in the AFW pump rooms) could have been delayed. This finding was determined to be of very low safety significance based on the availability of SSD equipment and the low number of ignition sources.

Inspection Report# : [2006009\(pdf\)](#)

Significance:  Mar 24, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Consider Adverse Ampacity Effects of High Temperature Conditions in the Auxiliary Feedwater Pump Rooms

A Non-Cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance was identified by the inspectors. Specifically, the licensee had not evaluated and updated the associated plant cable ampacity calculation to determine the potential consequences of adverse effects to cabling due to higher temperatures in the auxiliary feedwater (AFW) pump rooms and other auxiliary building areas. After identification by the inspectors, the licensee was able to demonstrate that even though the higher temperatures decreased the ampacity margins for the affected cabling, it did not decrease the margins to the limit where the cabling would fail if called upon to provide power to equipment important to safety.

The finding was more than minor because it affected the mitigating system cornerstone objective to ensure the availability, reliability, and capability of systems that mitigate transients and accidents, and if left uncorrected, the finding could become a more significant safety concern. Specifically, if left uncorrected, the licensee may not account for high temperature conditions in plant areas that could adversely affect the ampacity of cabling that supply power to equipment important to

safety. This finding was of very low safety significance because, the licensee's preliminary evaluation determined that the higher temperatures in the AFW pump rooms and other auxiliary building areas would not prevent equipment important to safety from functioning.

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Nov 23, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Configuration Control Event Causes a Loss Fire Suppression to the Relay Room

The carbon dioxide suppression system isolation valve for the relay room had been mis-positioned in the closed position rendering the suppression system non-functional. This finding was related to the Personnel subcategory of the cross-cutting area of Human Performance. Operators failed to open the valve following a maintenance activity. Operators failed to identify that the valve was mis-positioned in the closed position during two subsequent valve position surveillance activities.

Inspection Report# : [2005012\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM CODE VOLUMETRIC EXAMINATION OF THE 22 STEAM GENERATOR INLET NOZZLE WELD W-5

The inspectors identified a Non-Cited Violation of 10 CFR 50.55a(g)4 for failure to complete a code qualified volumetric examination of the 22 steam generator inlet nozzle weld W-5. As a corrective action, the licensee entered this issue into the corrective action program and performed an operability evaluation to accept this non-conforming weld for continued service.

This finding was of more than minor significance because it was associated with the Barrier Integrity cornerstone attribute of "Reactor Coolant System Equipment and Barrier Performance," and affected the cornerstone objective to provide reasonable assurance that physical design barriers (reactor coolant system) protect the public from radionuclide releases caused by accidents or events. Absent NRC intervention, the licensee would have relied on a limited unqualified ultrasonic examination of weld W-5, for an indefinite period of service which would have placed this reactor coolant pressure boundary weld at increased risk for undetected cracking, leakage, or component failure. This finding was of very low safety significance because the licensee performed an operability evaluation to accept the unqualified limited ultrasonic examination results (e.g., no indications). The finding is not suitable for a significance determination process evaluation, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The inspectors also determined that the cause of this finding was related to the work control aspect in the Human Performance cross-cutting area because the preventative maintenance work activity for the examination of weld W-5 was not effectively completed.

Inspection Report# : [2006004\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

G**Significance:** Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUATE CONCENTRATIONS OF RADIOACTIVE MATERIAL AND THE POTENTIAL RADIOLOGICAL HAZARDS

A self-revealed finding of very low safety significance and an associated violation of NRC requirements were identified for the failure to perform adequate evaluation of concentrations or quantities of radioactive material and the potential radiological hazards. Specifically, the licensee failed to adequately assess the radiological hazards and the potential for creating an airborne work area as required in 10 CFR 20.1501, which resulted in unplanned intakes of radioactive material.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The occurrence involved the program and process attribute of the objective because procedures were not adequately used to control exposure due to radioactive contamination. A Non-Cited Violation of 10 CFR 20.1501 was identified for the failure to cause surveys to be made that are reasonable under the circumstances to evaluate concentrations of radioactive material and the potential radiological hazards. Corrective actions taken by the licensee for this finding include: 1) developing an Apparent Cause Evaluation (ACE); 2) completing a department "human performance clock" reset to elevate awareness of the safety consequences of the human performance problems; and 3) developing a fleet team to evaluate the way Radiation Work Permits are written to determine if the process can be improved to prevent future similar failures. The fleet team evaluation was still in process during the inspection.

Inspection Report# : [2006004\(pdf\)](#)G**Significance:** Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

NRC IDENTIFIED LOSS OF HIGH RADIATION AREA BARRICADE AT UNIT 1 PRESSURIZER MISSILE SHIELD

A finding of very low safety significance and associated Non-Cited Violation (NCV) were inspector-identified during a walkdown in Unit 1 containment. The inspectors identified that a swing gate barrier to a High Radiation Area (HRA) was left in the open position due to misalignment of the gate in the stand. The licensee corrected the barrier misalignment and verified other HRA barriers in containment were properly operating and positioned. Radiation workers in containment were not self-checking to assure that the barriers were placed back into the correct position after traversing the HRA. The licensee entered this finding into the corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and potentially affected the cornerstone attribute of program and process for radiation worker performance. The finding was determined to be of very low safety significance because it did not involve an As-Low-As-Reasonably-Achievable (ALARA) issue, as collective dose was not a factor and no individual received an unintended dose as a result of the barrier non-compliance; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. Since the principal cause of the problem was a human performance deficiency, the finding also relates to the cross-cutting area of human performance.

Inspection Report# : [2006003\(pdf\)](#)G**Significance:** Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

ALARA PLANNING DOES NOT IDENTIFY AND PREPARE FOR POTENTIAL AIRBORNE CONDITIONS WHEN OPENING THE STEAM GENERATOR MANWAYS

A self-revealing finding of very low safety significance and associated NCV were identified when 110 radiation workers were contaminated as a result of opening steam generator manways during the Unit 1 1R24 refueling outage. Specific ALARA planning assessments did not acknowledge airborne concentrations of radioactivity may be subject to change. Additionally, the ALARA planning for this work did not consider the effect of engineering safety systems operation or malfunction on other work areas in containment, consequently when the work area was set up and initial work commenced,

the focus was on the immediate work area only, and the result was elevated iodine-131 levels throughout containment. The licensee evacuated containment, identified the source of airborne contamination, and repositioned and secured an air handling hose to the containment clean-up filter. The event was entered into the licensee's corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and potentially affected the cornerstone attribute of program and process for ALARA planning and exposure/contamination control. The finding was determined to be of very low safety significance because although the finding did involve an ALARA planning issue and resulted in unintended exposure to personnel, personnel doses were well below regulatory limits.

Inspection Report# : [2006003\(pdf\)](#)

Public Radiation Safety

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE FOR ODCM COMPLIANCE DOES NOT INCLUDE CONTAINMENT EFFLUENT THROUGH EQUIPMENT HATCH

A finding of very low safety significance and associated NCV were inspector-identified for the failure to establish adequate written procedure(s) for Offsite Dose Calculation Manual (ODCM) implementation to ensure that the radiological impact from releasing gaseous and particulate effluents from the Unit 1 containment equipment hatch to the environment was properly assessed prior to the release, and the release was properly quantified and reported. The licensee conservatively reconstructed the effluent concentrations and projected dose to the public, and entered the event into the corrective action program.

The finding was more than minor because the issue was associated with the Public Radiation Safety cornerstone attribute of program and process and potentially affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials from the release of gaseous effluents. The finding was determined to be of very low safety significance, because the issue was not associated with radioactive material control, and although there was an impaired ability to access dose prior to the releases, the licensee's dose assessment demonstrated that the actual effluent releases were calculated to be within regulatory dose limits and ALARA dose constraints. Since the principal cause of the problem was a problem identification and resolution deficiency, the finding also relates to the cross-cutting area of problem identification and resolution.

Inspection Report# : [2006003\(pdf\)](#)

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : December 21, 2006

Prairie Island 2

4Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A MAGNETIC PARTICLE EXAMINATION IN ACCORDANCE WITH ASME CODE SECTION XI

The inspectors identified a Non-Cited Violation of 10 CFR 50.55(a)(g)(4) for failure to perform a Magnetic Particle examination (MT) of the full required exam surface on a steam generator feedwater nozzle weld (N-1) in accordance with the American Society of Mechanical Engineers (ASME) Section XI Code. The licensee subsequently reperformed the MT in accordance with the ASME Code and entered this issue into their corrective action program.

This finding is greater than minor significance because it is associated with the initiating events cornerstone attribute of equipment performance, and affected the cornerstone objective to limit those events which upset plant safety and challenge safety systems. Absent NRC intervention, the licensee would not have performed the full Code-required exam of weld N-1 for an indefinite period of service, which would have placed the reactor coolant pressure boundary at increased risk for unanalyzed cracking, leakage, or component failure. This finding is of very low safety significance because a qualified examination was subsequently performed with no relevant indications detected. In particular, it did not result in the loss of function of the mitigating system.

Inspection Report# : [2006005](#) (*pdf*)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR EXTERNAL FLOODING (EVALUATION OF EXPIRED SEALANT PERFORMANCE FOR FLOOD PROTECTION)

The inspectors identified a Non-Cited Violation of 10 CFR Part 50 Appendix B, Criterion V for a combination of an inadequate procedure and a failure to implement the requirements of Surveillance Procedure 1293, Inspection of Flood Control Measures and the Shelf Life Program Procedure FP-SC-PE-05. Specifically, the licensee failed to order and maintain the correct type of Deck-O-Seal sealant to facilitate installation of flood doors and panels in accordance with plant abnormal procedures.

The finding was more than minor because it closely matched example 2E of Inspection Manual Chapter 0612, Appendix E. The inspectors determined the finding to be of very low safety significance following a review of a licensee's condition evaluation concluding that the finding did not increase the likelihood of the external flooding event affecting plant safety-related systems or components.

Inspection Report# : [2006002](#) (*pdf*)

Inspection Report# : [2006003](#) (*pdf*)

Mitigating Systems

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

No Fire-Rated Damper in Return Ventilation Duct

The inspectors identified a NCV of the Prairie Island Nuclear Generating Plant's (PINGP's) Facility Operating License, Section 2.C.(4) and 10 CFR 50.48(b)(1)(I) having very low safety significance for not having a three-hour fire-rated damper installed between the AFW pump room (Fire Area 31) and the 480 Volt normal switchgear room (Fire Area 37). In the licensee's safety evaluation report (SER) dated September 6, 1979, in Section 5.10.6, the NRC stated that all ventilation return ducts that penetrate room boundaries will have fire-rated dampers (three-hour or equivalent) installed. This finding was entered into the licensee's CAP as 01044959, "SER Committed Damper Not Installed in AFWP Return Duct," dated August 17, 2006, to resolve and initiate appropriate corrective actions. In addition, the licensee established compensatory measures (i.e., an hourly fire watch).

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. The failure to have a three-hour fire-rated damper installed in the ventilation's return duct could allow the propagation of a fire that could impact the ability of the plant to achieve and maintain SSD. This finding was determined to be of very low safety significance based on the availability of SSD systems and because other defense-in-depth fire protection elements remained unaffected. (Section 1R05.3b.1)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Surveillance Did Not Include TS Requirements

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include required instructions in a surveillance procedure. Specifically, the licensee failed to include the technical specification (TS) requirements in Surveillance Procedure (SP)-1266 "Fire Damper - 18-Month Inspection," dated June 2, 2004, to ensure that administrative controls were in place when opening the control room special ventilation system doors to inspect the fire dampers. This finding was entered into the licensee's CAP, the licensee also initiated procedure change request PCR01042837 to revise SP-1266 to reference the TS requirements.

This finding was more than minor because it could have become a more significant safety concern if the fire dampers inspection procedure was not revised to include appropriate administrative controls. Specifically, control room habitability could have been adversely affected if the ventilation duct access panel was not immediately closed during an event that could have resulted in smoke or toxic gas entry into the control room. This finding was determined to be of very low safety significance by an SDP Phase 3 evaluation.

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Smoke Detectors

The inspectors identified a NCV of the PINGP's Facility Operating License having very low safety significance for the failure to have adequate fire detection installed in accordance with the applicable NFPA codes. Specifically, the licensee failed to install detectors in beam pockets at the mezzanine areas located in the AFW pump rooms (Fire Areas 31 and 32). The inspectors determined that the cause of this finding was related to the self- and independent assessments aspect of the problem identification and resolution (PI and R) cross-cutting area because, in July of 2006, the licensee failed to identify the lack of detectors in the mezzanine areas during their evaluation of the NFPA 72E code compliance deviations for Fire Areas 31 and 32. This finding was entered into the licensee's CAP to evaluate the existing configuration in order to either justify the existing configuration as-is or implement a modification to correct the deficiency.

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. As a result of not having an adequate number of detectors, detection of a fire at these locations (i.e., in the AFW pump rooms) could have been delayed. This finding was determined to be of very low safety significance based on the availability of SSD equipment and the low number of ignition sources.

Inspection Report# : [2006009 \(pdf\)](#)

Significance:  Mar 24, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Consider Adverse Ampacity Effects of High Temperature Conditions in the Auxiliary Feedwater Pump Rooms

A Non-Cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance was identified by the inspectors. Specifically, the licensee had not evaluated and updated the associated plant cable ampacity calculation to determine the potential consequences of adverse effects to cabling due to higher temperatures in the auxiliary feedwater (AFW) pump rooms and other auxiliary building areas. After identification by the inspectors, the licensee was able to demonstrate that even though the higher temperatures decreased the ampacity margins for the affected cabling, it did not decrease the margins to the limit where the cabling would fail if called upon to provide power to equipment important to safety.

The finding was more than minor because it affected the mitigating system cornerstone objective to ensure the availability, reliability, and capability of systems that mitigate transients and accidents, and if left uncorrected, the finding could become a more significant safety concern. Specifically, if left uncorrected, the licensee may not account for high temperature conditions in plant areas that could adversely affect the ampacity of cabling that supply power to equipment important to safety. This finding was of very low safety significance because, the licensee's preliminary evaluation determined that the higher temperatures in the AFW pump rooms and other auxiliary building areas would not prevent equipment important to safety from functioning.

Inspection Report# : [2006006 \(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM CODE VOLUMETRIC EXAMINATION OF THE 22 STEAM GENERATOR INLET NOZZLE WELD W-5

The inspectors identified a Non-Cited Violation of 10 CFR 50.55a(g)4 for failure to complete a code qualified volumetric examination of the 22 steam generator inlet nozzle weld W-5. As a corrective action, the licensee entered this issue into the corrective action program and performed an operability evaluation to accept this non-conforming weld for continued service.

This finding was of more than minor significance because it was associated with the Barrier Integrity cornerstone attribute of "Reactor Coolant System Equipment and Barrier Performance," and affected the cornerstone objective to provide reasonable assurance that physical design barriers (reactor coolant system) protect the public from radionuclide releases caused by accidents or events. Absent NRC intervention, the licensee would have relied on a limited unqualified ultrasonic examination of weld W-5, for an indefinite period of service which would have placed this reactor coolant pressure boundary weld at increased risk for undetected cracking, leakage, or component failure. This finding was of very low safety significance because the licensee performed an operability evaluation to accept the unqualified limited ultrasonic examination results (e.g., no indications). The finding is not suitable for a significance determination process evaluation, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The inspectors also determined that the cause of this finding was related to the work control aspect in the Human Performance cross-cutting area because the preventative maintenance work activity for the examination of weld W-5 was not effectively completed.

Inspection Report# : [2006004 \(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUATE CONCENTRATIONS OF RADIOACTIVE MATERIAL AND THE POTENTIAL RADIOLOGICAL HAZARDS

A self-revealed finding of very low safety significance and an associated violation of NRC requirements were identified for the failure to perform adequate evaluation of concentrations or quantities of radioactive material and the potential radiological hazards. Specifically, the licensee failed to adequately assess the radiological hazards and the potential for creating an airborne work area as required in 10 CFR 20.1501, which resulted in unplanned intakes of radioactive material.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The occurrence involved the program and process attribute of the objective because procedures were not adequately used to control exposure due to radioactive contamination. A Non-Cited Violation of 10 CFR 20.1501 was identified for the failure to cause surveys to be made that are reasonable under the circumstances to evaluate concentrations of radioactive material and the potential radiological hazards. Corrective actions taken by the licensee for this finding include: 1) developing an Apparent Cause Evaluation (ACE); 2) completing a department "human performance clock" reset to elevate awareness of the safety consequences of the human performance problems; and 3) developing a fleet team to evaluate the way Radiation Work Permits are written to determine if the process can be improved to prevent future similar failures. The fleet team evaluation was still in process during the inspection.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

NRC IDENTIFIED LOSS OF HIGH RADIATION AREA BARRICADE AT UNIT 1 PRESSURIZER MISSILE SHIELD

A finding of very low safety significance and associated Non-Cited Violation (NCV) were inspector-identified during a walkdown in Unit 1 containment. The inspectors identified that a swing gate barrier to a High Radiation Area (HRA) was left in the open position due to misalignment of the gate in the stand. The licensee corrected the barrier misalignment and verified other HRA barriers in containment were properly operating and positioned. Radiation workers in containment were not self-checking to assure that the barriers were placed back into the correct position after traversing the HRA. The licensee entered this finding into the corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and potentially affected the cornerstone attribute of program and process for radiation worker performance. The finding was determined to be of very low safety significance because it did not involve an As-Low-As-Reasonably-Achievable (ALARA) issue, as collective dose was not a factor and no individual received an unintended dose as a result of the barrier non-compliance; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. Since the principal cause of the problem was a human performance deficiency, the finding also relates to the cross-cutting area of human performance.

Inspection Report# : [2006003](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

ALARA PLANNING DOES NOT IDENTIFY AND PREPARE FOR POTENTIAL AIRBORNE CONDITIONS WHEN OPENING THE STEAM GENERATOR MANWAYS

A self-revealing finding of very low safety significance and associated NCV were identified when 110 radiation workers were contaminated as a result of opening steam generator manways during the Unit 1 1R24 refueling outage. Specific ALARA planning assessments did not acknowledge airborne concentrations of radioactivity may be subject to change. Additionally, the ALARA planning for this work did not consider the effect of engineering safety systems operation or malfunction on other work areas in containment, consequently when the work area was set up and initial work commenced, the focus was on the immediate work area only, and the result was elevated iodine-131 levels throughout containment. The licensee evacuated containment, identified the source of airborne contamination, and repositioned and secured an air handling hose to the containment clean-up filter. The event was entered into the licensee's corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and potentially affected the cornerstone attribute of program and process for ALARA planning and exposure/contamination control. The finding was determined to be of very low safety significance because although the finding did involve an ALARA planning issue and resulted in unintended exposure to personnel, personnel doses were well below regulatory limits.

Inspection Report# : [2006003](#) (*pdf*)

Public Radiation Safety

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE FOR ODCM COMPLIANCE DOES NOT INCLUDE CONTAINMENT EFFLUENT THROUGH EQUIPMENT HATCH

A finding of very low safety significance and associated NCV were inspector-identified for the failure to establish adequate written procedure(s) for Offsite Dose Calculation Manual (ODCM) implementation to ensure that the radiological impact from releasing gaseous and particulate effluents from the Unit 1 containment equipment hatch to the environment was properly assessed prior to the release, and the release was properly quantified and reported. The licensee conservatively reconstructed the effluent concentrations and projected dose to the public, and entered the event into the corrective action program.

The finding was more than minor because the issue was associated with the Public Radiation Safety cornerstone attribute of program and process and potentially affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials from the release of gaseous effluents. The finding was determined to be of very low safety significance, because the issue was not associated with radioactive material control, and although there was an impaired ability to access dose prior to the releases, the licensee's dose assessment demonstrated that the actual effluent releases were calculated to be within regulatory dose limits and ALARA dose constraints. Since the principal cause of the problem was a problem identification and resolution deficiency, the finding also relates to the cross-cutting area of problem identification and resolution.

Inspection Report# : [2006003](#) (*pdf*)

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : March 01, 2007

Prairie Island 2

1Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A MAGNETIC PARTICLE EXAMINATION IN ACCORDANCE WITH ASME CODE SECTION XI

The inspectors identified a Non-Cited Violation of 10 CFR 50.55(a)(g)(4) for failure to perform a Magnetic Particle examination (MT) of the full required exam surface on a steam generator feedwater nozzle weld (N-1) in accordance with the American Society of Mechanical Engineers (ASME) Section XI Code. The licensee subsequently reformed the MT in accordance with the ASME Code and entered this issue into their corrective action program.

This finding is greater than minor significance because it is associated with the initiating events cornerstone attribute of equipment performance, and affected the cornerstone objective to limit those events which upset plant safety and challenge safety systems. Absent NRC intervention, the licensee would not have performed the full Code-required exam of weld N-1 for an indefinite period of service, which would have placed the reactor coolant pressure boundary at increased risk for unanalyzed cracking, leakage, or component failure. This finding is of very low safety significance because a qualified examination was subsequently performed with no relevant indications detected. In particular, it did not result in the loss of function of the mitigating system.

Inspection Report# : [2006005](#) (*pdf*)

Mitigating Systems

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

No Fire-Rated Damper in Return Ventilation Duct

The inspectors identified a NCV of the Prairie Island Nuclear Generating Plant's (PINGP's) Facility Operating License, Section 2.C.(4) and 10 CFR 50.48(b)(1)(I) having very low safety significance for not having a three-hour fire-rated damper installed between the AFW pump room (Fire Area 31) and the 480 Volt normal switchgear room (Fire Area 37). In the licensee's safety evaluation report (SER) dated September 6, 1979, in Section 5.10.6, the NRC stated that all ventilation return ducts that penetrate room boundaries will have fire-rated dampers (three-hour or equivalent) installed. This finding was entered into the licensee's CAP as 01044959, "SER Committed Damper Not Installed in AFWP Return Duct," dated August 17, 2006, to resolve and initiate appropriate corrective actions. In addition, the licensee established compensatory measures (i.e., an hourly fire watch).

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. The failure to have a three-hour fire-rated damper installed in the ventilation's return duct could allow the propagation of a fire that could impact the ability of the plant to achieve and maintain SSD. This finding was determined to be of very low safety significance based on the availability of SSD systems and because other defense-in-depth fire protection elements remained unaffected. (Section 1R05.3b.1)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Surveillance Did Not Include TS Requirements

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include required instructions in a surveillance procedure. Specifically, the licensee failed to include the technical specification (TS) requirements in Surveillance Procedure (SP)-1266 "Fire Damper - 18-Month Inspection," dated June 2, 2004, to ensure that administrative controls were in place when opening the control room special ventilation system doors to inspect the fire dampers. This finding was entered into the licensee's CAP, the licensee also initiated procedure change request PCR01042837 to revise SP-1266 to reference the TS requirements.

This finding was more than minor because it could have become a more significant safety concern if the fire dampers inspection procedure was not revised to include appropriate administrative controls. Specifically, control room habitability could have been adversely affected if the ventilation duct access panel was not immediately closed during an event that could have resulted in smoke or toxic gas entry into the control room. This finding was determined to be of very low safety significance by an SDP Phase 3 evaluation.

Inspection Report# : [2006009](#) (*pdf*)

G

Significance: Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Smoke Detectors

The inspectors identified a NCV of the PINGP's Facility Operating License having very low safety significance for the failure to have adequate fire detection installed in accordance with the applicable NFPA codes. Specifically, the licensee failed to install detectors in beam pockets at the mezzanine areas located in the AFW pump rooms (Fire Areas 31 and 32). The inspectors determined that the cause of this finding was related to the self- and independent assessments aspect of the problem identification and resolution (PI and R) cross-cutting area because, in July of 2006, the licensee failed to identify the lack of detectors in the mezzanine areas during their evaluation of the NFPA 72E code compliance deviations for Fire Areas 31 and 32. This finding was entered into the licensee's CAP to evaluate the existing configuration in order to either justify the existing configuration as-is or implement a modification to correct the deficiency.

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. As a result of not having an adequate number of detectors, detection of a fire at these locations (i.e., in the AFW pump rooms) could have been delayed. This finding was determined to be of very low safety significance based on the availability of SSD equipment and the low number of ignition sources.

Inspection Report# : [2006009](#) (*pdf*)

Barrier Integrity

G

Significance: Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM CODE VOLUMETRIC EXAMINATION OF THE 22 STEAM GENERATOR INLET NOZZLE WELD W-5

The inspectors identified a Non-Cited Violation of 10 CFR 50.55a(g)4 for failure to complete a code qualified volumetric examination of the 22 steam generator inlet nozzle weld W-5. As a corrective action, the licensee entered this issue into the corrective action program and performed an operability evaluation to accept this non-conforming weld for continued service.

This finding was of more than minor significance because it was associated with the Barrier Integrity cornerstone attribute of "Reactor Coolant System Equipment and Barrier Performance," and affected the cornerstone objective to provide reasonable assurance that physical design barriers (reactor coolant system) protect the public from radionuclide releases

caused by accidents or events. Absent NRC intervention, the licensee would have relied on a limited unqualified ultrasonic examination of weld W-5, for an indefinite period of service which would have placed this reactor coolant pressure boundary weld at increased risk for undetected cracking, leakage, or component failure. This finding was of very low safety significance because the licensee performed an operability evaluation to accept the unqualified limited ultrasonic examination results (e.g., no indications). The finding is not suitable for a significance determination process evaluation, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The inspectors also determined that the cause of this finding was related to the work control aspect in the Human Performance cross-cutting area because the preventative maintenance work activity for the examination of weld W-5 was not effectively completed.

Inspection Report# : [2006004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUATE CONCENTRATIONS OF RADIOACTIVE MATERIAL AND THE POTENTIAL RADIOLOGICAL HAZARDS

A self-revealed finding of very low safety significance and an associated violation of NRC requirements were identified for the failure to perform adequate evaluation of concentrations or quantities of radioactive material and the potential radiological hazards. Specifically, the licensee failed to adequately assess the radiological hazards and the potential for creating an airborne work area as required in 10 CFR 20.1501, which resulted in unplanned intakes of radioactive material.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The occurrence involved the program and process attribute of the objective because procedures were not adequately used to control exposure due to radioactive contamination. A Non-Cited Violation of 10 CFR 20.1501 was identified for the failure to cause surveys to be made that are reasonable under the circumstances to evaluate concentrations of radioactive material and the potential radiological hazards. Corrective actions taken by the licensee for this finding include: 1) developing an Apparent Cause Evaluation (ACE); 2) completing a department "human performance clock" reset to elevate awareness of the safety consequences of the human performance problems; and 3) developing a fleet team to evaluate the way Radiation Work Permits are written to determine if the process can be improved to prevent future similar failures. The fleet team evaluation was still in process during the inspection.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

NRC IDENTIFIED LOSS OF HIGH RADIATION AREA BARRICADE AT UNIT 1 PRESSURIZER MISSILE SHIELD

A finding of very low safety significance and associated Non-Cited Violation (NCV) were inspector-identified during a walkdown in Unit 1 containment. The inspectors identified that a swing gate barrier to a High Radiation Area (HRA) was left in the open position due to misalignment of the gate in the stand. The licensee corrected the barrier misalignment and verified other HRA barriers in containment were properly operating and positioned. Radiation workers in containment were not self-checking to assure that the barriers were placed back into the correct position after traversing the HRA. The licensee entered this finding into the corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and

potentially affected the cornerstone attribute of program and process for radiation worker performance. The finding was determined to be of very low safety significance because it did not involve an As-Low-As-Reasonably-Achievable (ALARA) issue, as collective dose was not a factor and no individual received an unintended dose as a result of the barrier non-compliance; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. Since the principal cause of the problem was a human performance deficiency, the finding also relates to the cross-cutting area of human performance.

Inspection Report# : [2006003](#) (*pdf*)

G

Significance: Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

ALARA PLANNING DOES NOT IDENTIFY AND PREPARE FOR POTENTIAL AIRBORNE CONDITIONS WHEN OPENING THE STEAM GENERATOR MANWAYS

A self-revealing finding of very low safety significance and associated NCV were identified when 110 radiation workers were contaminated as a result of opening steam generator manways during the Unit 1 1R24 refueling outage. Specific ALARA planning assessments did not acknowledge airborne concentrations of radioactivity may be subject to change. Additionally, the ALARA planning for this work did not consider the effect of engineering safety systems operation or malfunction on other work areas in containment, consequently when the work area was set up and initial work commenced, the focus was on the immediate work area only, and the result was elevated iodine-131 levels throughout containment. The licensee evacuated containment, identified the source of airborne contamination, and repositioned and secured an air handling hose to the containment clean-up filter. The event was entered into the licensee's corrective action program.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone, and potentially affected the cornerstone attribute of program and process for ALARA planning and exposure/contamination control. The finding was determined to be of very low safety significance because although the finding did involve an ALARA planning issue and resulted in unintended exposure to personnel, personnel doses were well below regulatory limits.

Inspection Report# : [2006003](#) (*pdf*)

Public Radiation Safety

G

Significance: Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURE FOR ODCM COMPLIANCE DOES NOT INCLUDE CONTAINMENT EFFLUENT THROUGH EQUIPMENT HATCH

A finding of very low safety significance and associated NCV were inspector-identified for the failure to establish adequate written procedure(s) for Offsite Dose Calculation Manual (ODCM) implementation to ensure that the radiological impact from releasing gaseous and particulate effluents from the Unit 1 containment equipment hatch to the environment was properly assessed prior to the release, and the release was properly quantified and reported. The licensee conservatively reconstructed the effluent concentrations and projected dose to the public, and entered the event into the corrective action program.

The finding was more than minor because the issue was associated with the Public Radiation Safety cornerstone attribute of program and process and potentially affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials from the release of gaseous effluents. The finding was determined to be of very low safety significance, because the issue was not associated with radioactive material control, and although there was an impaired ability to access dose prior to the releases, the licensee's dose assessment demonstrated that the actual effluent releases were calculated to be within regulatory dose limits and ALARA dose constraints. Since the principal cause of the problem was a problem identification and resolution deficiency, the finding also relates to the cross-cutting area of problem identification and resolution.

Inspection Report# : [2006003](#) (*pdf*)

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 01, 2007

Prairie Island 2

2Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAINTAIN SAFETY INJECTION RELAYS

Green. A finding of very low safety significance was self-revealed when a Unit 2 train A safeguards actuation and reactor trip occurred during the performance of the safeguards logic test at power. The actuation occurred because of a failure of the actuation relay to reset. The relay did not reset because of high electrical resistance across the relay contacts due to an oxide layer that accumulated through time. The oxide layer was due to a failure to perform periodic preventive maintenance on the reset contacts as recommended by the manufacturer and failure to periodically replace the relays as recommended by industry guidance. The licensee has entered this finding into the corrective action program. The immediate corrective actions were to replace the Unit 2 train A safeguards relays with new ones and to revise the logic test procedures to keep the relays in the test mode until the reset is verified. The procedure enhancement would not be required if the reset functioned as designed. Planned actions to prevent recurrence included replacement of all similar relays during the next refueling outage and implementation of a preventive maintenance optimization project.

This finding was greater than minor significance because it was associated with the Initiating Events cornerstone attribute of "Equipment Performance," and affected the cornerstone objective to limit those events which upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. No violation of NRC requirements occurred. The cause for the finding affected the cross-cutting area of problem identification and resolution in the operating experience aspect because the licensee did not effectively use internally generated lessons learned and vendor recommendations to institutionalize changes to the station preventive maintenance process (P.2(b)).

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A MAGNETIC PARTICLE EXAMINATION IN ACCORDANCE WITH ASME CODE SECTION XI

The inspectors identified a Non-Cited Violation of 10 CFR 50.55(a)(g)(4) for failure to perform a Magnetic Particle examination (MT) of the full required exam surface on a steam generator feedwater nozzle weld (N-1) in accordance with the American Society of Mechanical Engineers (ASME) Section XI Code. The licensee subsequently reperformed the MT in accordance with the ASME Code and entered this issue into their corrective action program.

This finding is greater than minor significance because it is associated with the initiating events cornerstone attribute of equipment performance, and affected the cornerstone objective to limit those events which upset plant safety and challenge safety systems. Absent NRC intervention, the licensee would not have performed the full Code-required exam of weld N-1 for an indefinite period of service, which would have placed the reactor coolant pressure boundary at increased risk for unanalyzed cracking, leakage, or component failure. This finding is of very low safety significance because a qualified examination was subsequently performed with no relevant indications detected. In particular, it did not result in the loss of function of the mitigating system.

Inspection Report# : [2006005](#) (*pdf*)

Mitigating Systems

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Modification of Safeguards Screenhouse Ventilation System

The inspectors identified a finding having very low significance (Green) and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee modified the safeguards screenhouse ventilation system by removing four fans and failed to verify or test the adequacy of the remaining ventilation exhaust fans to cool the safety-related cooling water pumps. Following discovery, the licensee entered the issue into its corrective action program, performed additional tests and calculations and revised the maximum allowable outside air temperature. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, without the evaluations and subsequent imposition of a new maximum outside temperature procedure limit, the inspectors had reasonable doubt that the diesel driven cooling water pumps would reliably perform their safety related function under adverse temperature conditions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Overload Heater Sizing for Safeguards Screenhouse Ventilation Exhaust Fan

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to ensure that the thermal overload heater for the 21 screenhouse safeguards roof exhaust fan had sufficient margin to allow proper operation under adverse conditions. Following discovery, the licensee entered the issue into its corrective action program, took actual running current measurements and performed preliminary calculations to justify operability. There was not a cross-cutting aspect to this violation.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because, at the time of discovery, there was reasonable doubt on the operability of fan 21. Specifically, because of the errors in setting and testing the 21 screenhouse safeguards roof exhaust fan thermal overload heater, actual field measurements and further evaluation needed to be performed in order to demonstrate that the overload heater could perform its safety function during a design basis event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Inputs for Motor-Operated Valve Calculations

The inspectors identified a finding having very low significance (Green) and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee used non-conservative inputs or methodologies in calculating terminal voltages or control circuit voltages to safety-related MOV motors that would be required to operate for mitigation of design bases events. Following discovery, the licensee redid a number of calculations to demonstrate MOV operability, performed an informal bounding analysis to verify that the inputs to the calculations were conservative and entered the issue into its corrective action program. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues,"

Example 3j for making an issue more than minor. Specifically, the use of non-conservative values of motor control center voltages or starting current to calculate MOV terminal voltages or control circuit voltages to safety-related MOVs, combined with the fact that the electrical voltage analyses had not been updated for a significant period of time to reflect plant modifications, and the omission of the cooling water crossover valve, with its required safety function to close during a design bases event resulted in a condition where there was reasonable doubt on the operability of the components. Both the electrical voltage calculations and mechanical thrust and torque calculations had to be re-evaluated to determine operability of the affected safety-related MOVs. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

No Fire-Rated Damper in Return Ventilation Duct

The inspectors identified a NCV of the Prairie Island Nuclear Generating Plant's (PINGP's) Facility Operating License, Section 2.C.(4) and 10 CFR 50.48(b)(1)(I) having very low safety significance for not having a three-hour fire-rated damper installed between the AFW pump room (Fire Area 31) and the 480 Volt normal switchgear room (Fire Area 37). In the licensee's safety evaluation report (SER) dated September 6, 1979, in Section 5.10.6, the NRC stated that all ventilation return ducts that penetrate room boundaries will have fire-rated dampers (three-hour or equivalent) installed. This finding was entered into the licensee's CAP as 01044959, "SER Committed Damper Not Installed in AFWP Return Duct," dated August 17, 2006, to resolve and initiate appropriate corrective actions. In addition, the licensee established compensatory measures (i.e., an hourly fire watch).

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. The failure to have a three-hour fire-rated damper installed in the ventilation's return duct could allow the propagation of a fire that could impact the ability of the plant to achieve and maintain SSD. This finding was determined to be of very low safety significance based on the availability of SSD systems and because other defense-in-depth fire protection elements remained unaffected. (Section 1R05.3b.1)

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Surveillance Did Not Include TS Requirements

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include required instructions in a surveillance procedure. Specifically, the licensee failed to include the technical specification (TS) requirements in Surveillance Procedure (SP)-1266 "Fire Damper - 18-Month Inspection," dated June 2, 2004, to ensure that administrative controls were in place when opening the control room special ventilation system doors to inspect the fire dampers. This finding was entered into the licensee's CAP, the licensee also initiated procedure change request PCR01042837 to revise SP-1266 to reference the TS requirements.

This finding was more than minor because it could have become a more significant safety concern if the fire dampers inspection procedure was not revised to include appropriate administrative controls. Specifically, control room habitability could have been adversely affected if the ventilation duct access panel was not immediately closed during an event that could have resulted in smoke or toxic gas entry into the control room. This finding was determined to be of very low safety significance by an SDP Phase 3 evaluation.

Inspection Report# : [2006009](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Smoke Detectors

The inspectors identified a NCV of the PINGP's Facility Operating License having very low safety significance for the failure to have adequate fire detection installed in accordance with the applicable NFPA codes. Specifically, the licensee failed to install detectors in beam pockets at the mezzanine areas located in the AFW pump rooms (Fire Areas 31 and 32). The inspectors determined that the cause of this finding was related to the self- and independent assessments aspect of the problem identification and resolution (PI and R) cross-cutting area because, in July of 2006, the licensee failed to identify the lack of detectors in the mezzanine areas during their evaluation of the NFPA 72E code compliance deviations for Fire Areas 31 and 32. This finding was entered into the licensee's CAP to evaluate the existing configuration in order to either justify the existing configuration as-is or implement a modification to correct the deficiency.

This finding was more than minor because it affected the mitigating systems cornerstone attribute of protection against external factors (i.e., fire) and it impacted the objective of the mitigating systems cornerstone. As a result of not having an adequate number of detectors, detection of a fire at these locations (i.e., in the AFW pump rooms) could have been delayed. This finding was determined to be of very low safety significance based on the availability of SSD equipment and the low number of ignition sources.

Inspection Report# : [2006009](#) (*pdf*)

Barrier Integrity



Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM CODE VOLUMETRIC EXAMINATION OF THE 22 STEAM GENERATOR INLET NOZZLE WELD W-5

The inspectors identified a Non-Cited Violation of 10 CFR 50.55a(g)4 for failure to complete a code qualified volumetric examination of the 22 steam generator inlet nozzle weld W-5. As a corrective action, the licensee entered this issue into the corrective action program and performed an operability evaluation to accept this non-conforming weld for continued service.

This finding was of more than minor significance because it was associated with the Barrier Integrity cornerstone attribute of "Reactor Coolant System Equipment and Barrier Performance," and affected the cornerstone objective to provide reasonable assurance that physical design barriers (reactor coolant system) protect the public from radionuclide releases caused by accidents or events. Absent NRC intervention, the licensee would have relied on a limited unqualified ultrasonic examination of weld W-5, for an indefinite period of service which would have placed this reactor coolant pressure boundary weld at increased risk for undetected cracking, leakage, or component failure. This finding was of very low safety significance because the licensee performed an operability evaluation to accept the unqualified limited ultrasonic examination results (e.g., no indications). The finding is not suitable for a significance determination process evaluation, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The inspectors also determined that the cause of this finding was related to the work control aspect in the Human Performance cross-cutting area because the preventative maintenance work activity for the examination of weld W-5 was not effectively completed.

Inspection Report# : [2006004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

G**Significance:** Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CONTINUE TO PERMIT UNIT 2 CONTAINMENT ACCESS ON RADIATION WORK PERMITS THAT DO NOT AUTHORIZE ACCESS TO AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated Non-Cited Violations were inspector-identified associated with the licensee's failure to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area, as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, human performance work practices require that the licensee define and effectively communicate expectations regarding procedural compliance and that personnel follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)**G****Significance:** Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVACUATE UNIT 2 CONTAINMENT UPON DETECTION OF ELEVATED AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated NCVs were identified by the inspectors. Specifically, the licensee failed to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance, using the significance determination process, because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose as a factor, an overexposure, a substantial potential for a worker overexposure, and any level of compromise of the licensee's ability to assess worker dose. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, the licensee did not effectively follow procedures and communicate expectations regarding procedural compliance and follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)**G****Significance:** Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUATE CONCENTRATIONS OF RADIOACTIVE MATERIAL AND THE

POTENTIAL RADIOLOGICAL HAZARDS

A self-revealed finding of very low safety significance and an associated violation of NRC requirements were identified for the failure to perform adequate evaluation of concentrations or quantities of radioactive material and the potential radiological hazards. Specifically, the licensee failed to adequately assess the radiological hazards and the potential for creating an airborne work area as required in 10 CFR 20.1501, which resulted in unplanned intakes of radioactive material.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The occurrence involved the program and process attribute of the objective because procedures were not adequately used to control exposure due to radioactive contamination. A Non-Cited Violation of 10 CFR 20.1501 was identified for the failure to cause surveys to be made that are reasonable under the circumstances to evaluate concentrations of radioactive material and the potential radiological hazards. Corrective actions taken by the licensee for this finding include: 1) developing an Apparent Cause Evaluation (ACE); 2) completing a department “human performance clock” reset to elevate awareness of the safety consequences of the human performance problems; and 3) developing a fleet team to evaluate the way Radiation Work Permits are written to determine if the process can be improved to prevent future similar failures. The fleet team evaluation was still in process during the inspection.

Inspection Report# : [2006004](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 24, 2007

Prairie Island 2

3Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAINTAIN SAFETY INJECTION RELAYS

Green. A finding of very low safety significance was self-revealed when a Unit 2 train A safeguards actuation and reactor trip occurred during the performance of the safeguards logic test at power. The actuation occurred because of a failure of the actuation relay to reset. The relay did not reset because of high electrical resistance across the relay contacts due to an oxide layer that accumulated through time. The oxide layer was due to a failure to perform periodic preventive maintenance on the reset contacts as recommended by the manufacturer and failure to periodically replace the relays as recommended by industry guidance. The licensee has entered this finding into the corrective action program. The immediate corrective actions were to replace the Unit 2 train A safeguards relays with new ones and to revise the logic test procedures to keep the relays in the test mode until the reset is verified. The procedure enhancement would not be required if the reset functioned as designed. Planned actions to prevent recurrence included replacement of all similar relays during the next refueling outage and implementation of a preventive maintenance optimization project.

This finding was greater than minor significance because it was associated with the Initiating Events cornerstone attribute of "Equipment Performance," and affected the cornerstone objective to limit those events which upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. No violation of NRC requirements occurred. The cause for the finding affected the cross-cutting area of problem identification and resolution in the operating experience aspect because the licensee did not effectively use internally generated lessons learned and vendor recommendations to institutionalize changes to the station preventive maintenance process (P.2(b)).

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A MAGNETIC PARTICLE EXAMINATION IN ACCORDANCE WITH ASME CODE SECTION XI

The inspectors identified a Non-Cited Violation of 10 CFR 50.55(a)(g)(4) for failure to perform a Magnetic Particle examination (MT) of the full required exam surface on a steam generator feedwater nozzle weld (N-1) in accordance with the American Society of Mechanical Engineers (ASME) Section XI Code. The licensee subsequently reperformed the MT in accordance with the ASME Code and entered this issue into their corrective action program.

This finding is greater than minor significance because it is associated with the initiating events cornerstone attribute of equipment performance, and affected the cornerstone objective to limit those events which upset plant safety and challenge safety systems. Absent NRC intervention, the licensee would not have performed the full Code-required exam of weld N-1 for an indefinite period of service, which would have placed the reactor coolant pressure boundary at increased risk for unanalyzed cracking, leakage, or component failure. This finding is of very low safety significance because a qualified examination was subsequently performed with no relevant indications detected. In particular, it did not result in the loss of function of the mitigating system.

Inspection Report# : [2006005](#) (*pdf*)

Mitigating Systems

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Modification of Safeguards Screenhouse Ventilation System

The inspectors identified a finding having very low significance (Green) and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee modified the safeguards screenhouse ventilation system by removing four fans and failed to verify or test the adequacy of the remaining ventilation exhaust fans to cool the safety-related cooling water pumps. Following discovery, the licensee entered the issue into its corrective action program, performed additional tests and calculations and revised the maximum allowable outside air temperature. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, without the evaluations and subsequent imposition of a new maximum outside temperature procedure limit, the inspectors had reasonable doubt that the diesel driven cooling water pumps would reliably perform their safety related function under adverse temperature conditions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Overload Heater Sizing for Safeguards Screenhouse Ventilation Exhaust Fan

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to ensure that the thermal overload heater for the 21 screenhouse safeguards roof exhaust fan had sufficient margin to allow proper operation under adverse conditions. Following discovery, the licensee entered the issue into its corrective action program, took actual running current measurements and performed preliminary calculations to justify operability. There was not a cross-cutting aspect to this violation.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because, at the time of discovery, there was reasonable doubt on the operability of fan 21. Specifically, because of the errors in setting and testing the 21 screenhouse safeguards roof exhaust fan thermal overload heater, actual field measurements and further evaluation needed to be performed in order to demonstrate that the overload heater could perform its safety function during a design basis event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Inputs for Motor-Operated Valve Calculations

The inspectors identified a finding having very low significance (Green) and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee used non-conservative inputs or methodologies in calculating terminal voltages or control circuit voltages to safety-related MOV motors that would be required to operate for mitigation of design bases events. Following discovery, the licensee redid a number of calculations to demonstrate MOV operability, performed an informal bounding analysis to verify that the inputs to the calculations were conservative and entered the issue into its corrective action program. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues,"

Example 3j for making an issue more than minor. Specifically, the use of non-conservative values of motor control center voltages or starting current to calculate MOV terminal voltages or control circuit voltages to safety-related MOVs, combined with the fact that the electrical voltage analyses had not been updated for a significant period of time to reflect plant modifications, and the omission of the cooling water crossover valve, with its required safety function to close during a design bases event resulted in a condition where there was reasonable doubt on the operability of the components. Both the electrical voltage calculations and mechanical thrust and torque calculations had to be re-evaluated to determine operability of the affected safety-related MOVs. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CONTINUE TO PERMIT UNIT 2 CONTAINMENT ACCESS ON RADIATION WORK PERMITS THAT DO NOT AUTHORIZE ACCESS TO AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated Non-Cited Violations were inspector-identified associated with the licensee's failure to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area, as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, human performance work practices require that the licensee define and effectively communicate expectations regarding procedural compliance and that personnel follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVACUATE UNIT 2 CONTAINMENT UPON DETECTION OF ELEVATED AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated NCVs were identified by the inspectors. Specifically, the licensee failed to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance, using the significance determination process, because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose as a factor, an overexposure, a substantial potential for a worker overexposure, and any level of compromise of the licensee's ability to assess worker dose. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, the licensee did not effectively follow procedures and communicate expectations regarding procedural compliance and follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : December 07, 2007

Prairie Island 2

4Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAINTAIN SAFETY INJECTION RELAYS

Green. A finding of very low safety significance was self-revealed when a Unit 2 train A safeguards actuation and reactor trip occurred during the performance of the safeguards logic test at power. The actuation occurred because of a failure of the actuation relay to reset. The relay did not reset because of high electrical resistance across the relay contacts due to an oxide layer that accumulated through time. The oxide layer was due to a failure to perform periodic preventive maintenance on the reset contacts as recommended by the manufacturer and failure to periodically replace the relays as recommended by industry guidance. The licensee has entered this finding into the corrective action program. The immediate corrective actions were to replace the Unit 2 train A safeguards relays with new ones and to revise the logic test procedures to keep the relays in the test mode until the reset is verified. The procedure enhancement would not be required if the reset functioned as designed. Planned actions to prevent recurrence included replacement of all similar relays during the next refueling outage and implementation of a preventive maintenance optimization project.

This finding was greater than minor significance because it was associated with the Initiating Events cornerstone attribute of "Equipment Performance," and affected the cornerstone objective to limit those events which upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. No violation of NRC requirements occurred. The cause for the finding affected the cross-cutting area of problem identification and resolution in the operating experience aspect because the licensee did not effectively use internally generated lessons learned and vendor recommendations to institutionalize changes to the station preventive maintenance process (P.2(b)).

Inspection Report# : [2007003](#) (*pdf*)

Mitigating Systems

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Modification of Safeguards Screenhouse Ventilation System

The inspectors identified a finding having very low significance (Green) and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee modified the safeguards screenhouse ventilation system by removing four fans and failed to verify or test the adequacy of the remaining ventilation exhaust fans to cool the safety-related cooling water pumps. Following discovery, the licensee entered the issue into its corrective action program, performed additional tests and calculations and revised the maximum allowable outside air temperature. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, without the evaluations and subsequent imposition of a new maximum outside temperature procedure limit, the inspectors had reasonable doubt that the diesel driven cooling water pumps would reliably perform their safety related function under adverse temperature conditions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Overload Heater Sizing for Safeguards Screenhouse Ventilation Exhaust Fan

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to ensure that the thermal overload heater for the 21 screenhouse safeguards roof exhaust fan had sufficient margin to allow proper operation under adverse conditions. Following discovery, the licensee entered the issue into its corrective action program, took actual running current measurements and performed preliminary calculations to justify operability. There was not a cross-cutting aspect to this violation.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because, at the time of discovery, there was reasonable doubt on the operability of fan 21. Specifically, because of the errors in setting and testing the 21 screenhouse safeguards roof exhaust fan thermal overload heater, actual field measurements and further evaluation needed to be performed in order to demonstrate that the overload heater could perform its safety function during a design basis event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (pdf)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Inputs for Motor-Operated Valve Calculations

The inspectors identified a finding having very low significance (Green) and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee used non-conservative inputs or methodologies in calculating terminal voltages or control circuit voltages to safety-related MOV motors that would be required to operate for mitigation of design bases events. Following discovery, the licensee redid a number of calculations to demonstrate MOV operability, performed an informal bounding analysis to verify that the inputs to the calculations were conservative and entered the issue into its corrective action program. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, the use of non-conservative values of motor control center voltages or starting current to calculate MOV terminal voltages or control circuit voltages to safety-related MOVs, combined with the fact that the electrical voltage analyses had not been updated for a significant period of time to reflect plant modifications, and the omission of the cooling water crossover valve, with its required safety function to close during a design bases event resulted in a condition where there was reasonable doubt on the operability of the components. Both the electrical voltage calculations and mechanical thrust and torque calculations had to be re-evaluated to determine operability of the affected safety-related MOVs. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CONTINUE TO PERMIT UNIT 2 CONTAINMENT ACCESS ON RADIATION WORK PERMITS THAT DO NOT AUTHORIZE ACCESS TO AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated Non-Cited Violations were inspector-identified associated with the licensee's failure to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area, as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, human performance work practices require that the licensee define and effectively communicate expectations regarding procedural compliance and that personnel follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVACUATE UNIT 2 CONTAINMENT UPON DETECTION OF ELEVATED AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated NCVs were identified by the inspectors. Specifically, the licensee failed to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance, using the significance determination process, because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose as a factor, an overexposure, a substantial potential for a worker overexposure, and any level of compromise of the licensee's ability to assess worker dose. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, the licensee did not effectively follow procedures and communicate expectations regarding procedural compliance and follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : February 04, 2008

Prairie Island 2

1Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAINTAIN SAFETY INJECTION RELAYS

Green. A finding of very low safety significance was self-revealed when a Unit 2 train A safeguards actuation and reactor trip occurred during the performance of the safeguards logic test at power. The actuation occurred because of a failure of the actuation relay to reset. The relay did not reset because of high electrical resistance across the relay contacts due to an oxide layer that accumulated through time. The oxide layer was due to a failure to perform periodic preventive maintenance on the reset contacts as recommended by the manufacturer and failure to periodically replace the relays as recommended by industry guidance. The licensee has entered this finding into the corrective action program. The immediate corrective actions were to replace the Unit 2 train A safeguards relays with new ones and to revise the logic test procedures to keep the relays in the test mode until the reset is verified. The procedure enhancement would not be required if the reset functioned as designed. Planned actions to prevent recurrence included replacement of all similar relays during the next refueling outage and implementation of a preventive maintenance optimization project.

This finding was greater than minor significance because it was associated with the Initiating Events cornerstone attribute of "Equipment Performance," and affected the cornerstone objective to limit those events which upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. No violation of NRC requirements occurred. The cause for the finding affected the cross-cutting area of problem identification and resolution in the operating experience aspect because the licensee did not effectively use internally generated lessons learned and vendor recommendations to institutionalize changes to the station preventive maintenance process (P.2(b)).

Inspection Report# : [2007003](#) (*pdf*)

Mitigating Systems

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Modification of Safeguards Screenhouse Ventilation System

The inspectors identified a finding having very low significance (Green) and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee modified the safeguards screenhouse ventilation system by removing four fans and failed to verify or test the adequacy of the remaining ventilation exhaust fans to cool the safety-related cooling water pumps. Following discovery, the licensee entered the issue into its corrective action program, performed additional tests and calculations and revised the maximum allowable outside air temperature. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, without the evaluations and subsequent imposition of a new maximum outside temperature procedure limit, the inspectors had reasonable doubt that the diesel driven cooling water pumps would reliably perform their safety related function under adverse temperature conditions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (*pdf*)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Overload Heater Sizing for Safeguards Screenhouse Ventilation Exhaust Fan

The inspectors identified a finding having very low significance and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to ensure that the thermal overload heater for the 21 screenhouse safeguards roof exhaust fan had sufficient margin to allow proper operation under adverse conditions. Following discovery, the licensee entered the issue into its corrective action program, took actual running current measurements and performed preliminary calculations to justify operability. There was not a cross-cutting aspect to this violation.

This issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Disposition Screening," because, at the time of discovery, there was reasonable doubt on the operability of fan 21. Specifically, because of the errors in setting and testing the 21 screenhouse safeguards roof exhaust fan thermal overload heater, actual field measurements and further evaluation needed to be performed in order to demonstrate that the overload heater could perform its safety function during a design basis event. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (pdf)

Significance:  Jun 22, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Inputs for Motor-Operated Valve Calculations

The inspectors identified a finding having very low significance (Green) and an associated non cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee used non-conservative inputs or methodologies in calculating terminal voltages or control circuit voltages to safety-related MOV motors that would be required to operate for mitigation of design bases events. Following discovery, the licensee redid a number of calculations to demonstrate MOV operability, performed an informal bounding analysis to verify that the inputs to the calculations were conservative and entered the issue into its corrective action program. There was not a cross-cutting aspect to this violation.

This issue was more than minor because it met the criteria in IMC 0612, Appendix E, "Examples of Minor Issues," Example 3j for making an issue more than minor. Specifically, the use of non-conservative values of motor control center voltages or starting current to calculate MOV terminal voltages or control circuit voltages to safety-related MOVs, combined with the fact that the electrical voltage analyses had not been updated for a significant period of time to reflect plant modifications, and the omission of the cooling water crossover valve, with its required safety function to close during a design bases event resulted in a condition where there was reasonable doubt on the operability of the components. Both the electrical voltage calculations and mechanical thrust and torque calculations had to be re-evaluated to determine operability of the affected safety-related MOVs. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations.

Inspection Report# : [2007007](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

TSC VENTILATION ISSUES RESULTED IN INADEQUATE EMERGENCY RESPONSE FACILITY

Green. The inspectors identified a NCV of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain adequate emergency facilities to support emergency response. Specifically, the licensee failed to maintain control of the Technical Support Center ventilation system. As a result, the system was frequently found to be in a degraded condition that may not have provided adequate protection for emergency response personnel.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the SDP Phase 1 Screening Worksheet of IMC 0609, the inspectors applied Appendix B, "Emergency Preparedness Significance Determination Process," Section 4.8 and determined that this issue was of very low safety significance. Specifically, the Technical Support Center ventilation system was degraded for a period of longer than seven days from the time of original discovery. In addition, the degradation was to the extent that key emergency response organization members may not have been able to perform their assigned plan functions without compensatory measures. The finding was determined to be cross cutting in the corrective action program aspect of the Problem Identification and Resolution cross-cutting area because the licensee failed to thoroughly evaluate repeated problems with the Technical Support Center ventilation system such that the causes of the problems were identified and addressed (P.1(c)).

Inspection Report# : [2008002](#) (*pdf*)

Occupational Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

WORKER NOT IN COMPLIANCE WITH TS 5.7.1 B RECEIVED AN ED DOSE-RATE ALARM WHEN HE INAPPROPRIATELY ENTERED A HRA OF THE PLANT DURING STEAM GENERATOR SET-UP WORK

Green. A self-revealing finding of very low safety significance and an associated NCV were identified for the licensee's failure to comply with Technical Specification 5.7.1.b for access control to high radiation areas of the plant. As a result of poor human performance, a contract radiation worker received an electronic dosimeter high dose-rate alarm while performing steam generator set-up activities, when he inappropriately entered a high radiation area of the plant on a non-high radiation area radiation work permit. As corrective actions, the licensee provided additional training to the individuals involved and reinforced the expectations for high radiation area access control.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation, in that the failure to implement controls for high radiation area entry may result in unplanned dose. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning; it did not involve an overexposure; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect of human performance in work control (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE IMPLEMENTATION OF VHRA CONTROLS FOR THE C-SUMP IN U1R24

Green. A finding of very low safety significance and an associated Non-Cited Violation (NCV) was inspector-identified for the licensee's failure to adequately maintain sufficient controls over a posted very high radiation area (VHRA) during the spring 2006 Unit-1 refuel outage (U1R24) contrary to 10 CFR 20.1602 and station procedural

requirements. Specifically, the licensee failed to maintain appropriate control of the C-sump (i.e., the thimble tube chase). The licensee has entered the issue into the corrective action program. Licensee corrective actions included reinforcing expectations for procedural compliance and revising the procedures to require the written permission of the plant manager for VHRA key issue.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of Human Performance associated with the aspect of work practices in procedural compliance (H.4.b).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF VHRA KEYS IN U2R24

Green. A finding of very low safety significance and an associated NCV of Technical Specification 5.4.1 was inspector-identified for the licensee's failure to adequately implement radiation safety procedures concerning the 2006 Unit-2 refueling outage when the C-sump VHRA key was signed out by radiation protection (RP) supervision and possession of the key was transferred between individuals over multiple shifts. The licensee has entered the issue into the corrective action program. Licensee corrective actions for this issue included reinforcing expectations for procedural compliance and revising the procedures to ensure that the VHRA keys are maintained in the control of RP supervision, that possession is not transferred between personnel, and that VHRA keys are checked back in at the end of each shift.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve ALARA planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. . The cause of the finding is related to the cross-cutting area of Problem Identification and Resolution associated with the aspect of corrective action program specifically that the licensee takes appropriate corrective actions to address safety issues, commensurate with their significance (P.1.d).

Inspection Report# : [2007005](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

CONTINUE TO PERMIT UNIT 2 CONTAINMENT ACCESS ON RADIATION WORK PERMITS THAT DO NOT AUTHORIZE ACCESS TO AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated Non-Cited Violations were inspector-identified associated with the licensee's failure to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area, as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose was not a factor, it

did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, human performance work practices require that the licensee define and effectively communicate expectations regarding procedural compliance and that personnel follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVACUATE UNIT 2 CONTAINMENT UPON DETECTION OF ELEVATED AIRBORNE RADIOACTIVITY LEVELS

Green. A finding of very low safety significance and two associated NCVs were identified by the inspectors. Specifically, the licensee failed to adequately implement radiation safety procedures concerning the control and response to airborne radiological conditions in containment during the Unit 2 refueling outage (U2R24). After airborne radiological conditions were identified, station personnel continued to access the Unit 2 containment on radiation work permits that did not allow work in a posted airborne radioactivity area. Additionally, once elevated airborne radiation conditions were detected, all personnel were not evacuated from the area as required by station procedures. The licensee entered the issue into the corrective action program. Licensee corrective actions for this issue included changes to outage planning and scheduling activities to minimize the likelihood of creating airborne conditions in containment and reinforcing the necessity for procedural compliance.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance, using the significance determination process, because the finding did not involve As-Low-As-Reasonably-Achievable planning, collective dose as a factor, an overexposure, a substantial potential for a worker overexposure, and any level of compromise of the licensee's ability to assess worker dose. The cause of the finding is related to a cross-cutting aspect in the area of human performance in work practices. Specifically, the licensee did not effectively follow procedures and communicate expectations regarding procedural compliance and follow procedures (H.4(b)).

Inspection Report# : [2007003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : June 05, 2008

Prairie Island 2

2Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: SL-IV Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

USAR NOT UPDATED TO INCLUDE ANALYSES

Severity Level IV. The inspectors identified an Non-Cited Violation of 10 CFR 50.71, "Maintenance of records, making of reports," for the licensee's failure to adequately update the Prairie Island Nuclear Generating Plant Updated Safety Analysis Report (USAR) to include analyses performed in response to Generic Letter (GL) 2004-02. Title 10 CFR 50.71(e) requires, in part, that the USAR be revised to include the effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The Commission, through GL 2004-02, requested that licensees perform an evaluation of the Emergency Core Cooling Systems and its associated recirculation functions and, if appropriate, take additional actions to ensure system function. The licensee, in response to GL 2004-02, performed analyses of debris generation and transport, chemical effects, downstream effects, upstream effects, and strainer and other structural analysis, but did not update the safety analysis report to include those analyses.

This issue potentially impacted the NRC's ability to perform its regulatory function and therefore, it was evaluated using the traditional enforcement process. The inspectors determined that the finding was more than minor because of the potential to impact the regulatory process by using IMC 0612, Appendix B, "Issue Screening," dated September 20, 2007. Specifically, the failure to provide complete licensing and design basis information in the USAR could result in either the licensee making an inappropriate interpretation or the NRC making an inappropriate regulatory decision based on incomplete information in the USAR. This finding has a cross-cutting aspect in the area of human performance, work practices (H.4(c)) because the licensee did not ensure supervisory and management oversight of work activities such that nuclear safety was supported. Corrective actions included revising the USAR to reflect the analyses and submitting the updated information to the NRC.

Inspection Report# : [2008003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

TSC VENTILATION ISSUES RESULTED IN INADEQUATE EMERGENCY RESPONSE FACILITY

Green. The inspectors identified a NCV of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain adequate emergency facilities to support emergency response. Specifically, the licensee failed to maintain control of the Technical Support Center ventilation system. As a result, the system was frequently found to be in a degraded condition that may not have provided adequate protection for emergency response personnel.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10

CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the SDP Phase 1 Screening Worksheet of IMC 0609, the inspectors applied Appendix B, "Emergency Preparedness Significance Determination Process," Section 4.8 and determined that this issue was of very low safety significance. Specifically, the Technical Support Center ventilation system was degraded for a period of longer than seven days from the time of original discovery. In addition, the degradation was to the extent that key emergency response organization members may not have been able to perform their assigned plan functions without compensatory measures. The finding was determined to be cross cutting in the corrective action program aspect of the Problem Identification and Resolution cross-cutting area because the licensee failed to thoroughly evaluate repeated problems with the Technical Support Center ventilation system such that the causes of the problems were identified and addressed (P.1(c)).

Inspection Report# : [2008002](#) (pdf)

Occupational Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

WORKER NOT IN COMPLIANCE WITH TS 5.7.1 B RECEIVED AN ED DOSE-RATE ALARM WHEN HE INAPPROPRIATELY ENTERED A HRA OF THE PLANT DURING STEAM GENERATOR SET-UP WORK

Green. A self-revealing finding of very low safety significance and an associated NCV were identified for the licensee's failure to comply with Technical Specification 5.7.1.b for access control to high radiation areas of the plant. As a result of poor human performance, a contract radiation worker received an electronic dosimeter high dose-rate alarm while performing steam generator set-up activities, when he inappropriately entered a high radiation area of the plant on a non-high radiation area radiation work permit. As corrective actions, the licensee provided additional training to the individuals involved and reinforced the expectations for high radiation area access control.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation, in that the failure to implement controls for high radiation area entry may result in unplanned dose. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning; it did not involve an overexposure; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect of human performance in work control (H.3(b)).

Inspection Report# : [2008002](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE IMPLEMENTATION OF VHRA CONTROLS FOR THE C-SUMP IN U1R24

Green. A finding of very low safety significance and an associated Non-Cited Violation (NCV) was inspector-identified for the licensee's failure to adequately maintain sufficient controls over a posted very high radiation area (VHRA) during the spring 2006 Unit-1 refuel outage (U1R24) contrary to 10 CFR 20.1602 and station procedural requirements. Specifically, the licensee failed to maintain appropriate control of the C-sump (i.e., the thimble tube chase). The licensee has entered the issue into the corrective action program. Licensee corrective actions included reinforcing expectations for procedural compliance and revising the procedures to require the written permission of the plant manager for VHRA key issue.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of

worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of Human Performance associated with the aspect of work practices in procedural compliance (H.4.b).

Inspection Report# : [2007005](#) (*pdf*)

Significance: **G** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF VHRA KEYS IN U2R24

Green. A finding of very low safety significance and an associated NCV of Technical Specification 5.4.1 was inspector-identified for the licensee's failure to adequately implement radiation safety procedures concerning the 2006 Unit-2 refueling outage when the C-sump VHRA key was signed out by radiation protection (RP) supervision and possession of the key was transferred between individuals over multiple shifts. The licensee has entered the issue into the corrective action program. Licensee corrective actions for this issue included reinforcing expectations for procedural compliance and revising the procedures to ensure that the VHRA keys are maintained in the control of RP supervision, that possession is not transferred between personnel, and that VHRA keys are checked back in at the end of each shift.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve ALARA planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. . The cause of the finding is related to the cross-cutting area of Problem Identification and Resolution associated with the aspect of corrective action program specifically that the licensee takes appropriate corrective actions to address safety issues, commensurate with their significance (P.1.d).

Inspection Report# : [2007005](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 29, 2008

Prairie Island 2

3Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

LOAD SEQUENCER TEST PROCEDURE CONFLICTS WITH VENDOR MANUAL INFORMATION

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion V for the failure to ensure that the surveillance procedures used to test the safety related load sequencers included appropriate qualitative acceptance criteria. Specifically, the acceptance criteria specified in the procedure conflicted with vendor manual information and was less conservative. Corrective actions for this issue included revising the surveillance procedures to include the vendor manual information and implementing a comprehensive preventive maintenance program to improve the availability and reliability of the load sequencers.

This finding was more than minor because it was associated with the procedure quality and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, the finding affected the cornerstone objective of ensuring the availability and reliability of equipment to respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because it was not a design issue resulting in loss of operability or functionality, it did not result in a loss of safety function, it did not result in loss of safety function for a single train for greater than the allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that this finding was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions during the February 2007 decision that led to making the load sequencer surveillance procedure non-conservative (H.1(b)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Jul 09, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security Related Finding - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008006](#) (*pdf*)

Significance: SL-IV Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

USAR NOT UPDATED TO INCLUDE ANALYSES

Severity Level IV. The inspectors identified a Non-Cited Violation of 10 CFR 50.71, "Maintenance of records, making of reports," for the licensee's failure to adequately update the Prairie Island Nuclear Generating Plant Updated Safety Analysis Report (USAR) to include analyses performed in response to Generic Letter (GL) 2004-02. Title 10 CFR 50.71(e) requires, in part, that the USAR be revised to include the effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The Commission, through GL 2004-02, requested that licensees perform an evaluation of the Emergency Core Cooling Systems and its associated recirculation functions and, if appropriate, take additional actions to ensure system function. The licensee, in response to GL 2004-02, performed analyses of debris generation and transport, chemical effects, downstream effects, upstream effects, and strainer and other structural analysis, but did not update the safety analysis report to include those analyses.

This issue potentially impacted the NRC's ability to perform its regulatory function and therefore, it was evaluated using the traditional enforcement process. The inspectors determined that the finding was more than minor because of the potential to impact the regulatory process by using IMC 0612, Appendix B, "Issue Screening," dated September 20, 2007. Specifically, the failure to provide complete licensing and design basis information in the USAR could result in either the licensee making an inappropriate interpretation or the NRC making an inappropriate regulatory decision based on incomplete information in the USAR. This finding has a cross-cutting aspect in the area

of human performance, work practices (H.4(c)) because the licensee did not ensure supervisory and management oversight of work activities such that nuclear safety was supported. Corrective actions included revising the USAR to reflect the analyses and submitting the updated information to the NRC.

Inspection Report# : [2008003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN STAFF RESPIRATORY QUALIFICATIONS INCLUDING PERSONNEL QUALIFICATIONS NECESSARY FOR EMERGENCY RESPONSE DUTIES AS REQUIRED BY STATION PROCEDURES

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q) for the failure to maintain staff respiratory qualifications, including personnel qualifications necessary for emergency response duties, as required by station procedures. Specifically, the inspectors identified multiple instances over the last several years where station personnel, including those required to maintain their respiratory readiness necessary for emergency response functions, failed to maintain their qualifications current. The most recent instances being a fire brigade member standing duty without the necessary respiratory fit test and a reactor operator standing duty without the necessary respiratory protection training. Planned corrective actions included periodic reviews to identify respiratory protection qualification issues prior to expiration to ensure that impacted departments maintained compliance with station procedures until the next scheduled periodic review.

The issue was more than minor because it was chronic in nature and associated with the facilities/equipment attribute of the Emergency Preparedness Cornerstone. The inspectors determined that the issue affected the cornerstone objective to ensure adequate protection of plant emergency workers (and consequently the health and safety of the public in the event of a radiological emergency) should the workers be called upon to use the equipment. Since the finding did not represent a functional failure of the Planning Standard, and the workers who were required to use respiratory protective equipment were not qualified and/or trained to use that equipment, the finding was determined to be of very low safety significance (Green). The inspectors determined that this finding was cross-cutting in the area of Problem Identification and Resolution because the licensee failed to take appropriate corrective actions once the issue was identified (P.1(d)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

TSC VENTILATION ISSUES RESULTED IN INADEQUATE EMERGENCY RESPONSE FACILITY

Green. The inspectors identified a NCV of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain adequate emergency facilities to support emergency response. Specifically, the licensee failed to maintain control of the Technical Support Center ventilation system. As a result, the system was frequently found to be in a degraded condition that may not have provided adequate protection for emergency response personnel.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the SDP Phase 1 Screening Worksheet of IMC 0609, the inspectors applied Appendix B, "Emergency Preparedness Significance Determination Process," Section 4.8 and determined that this issue was of very low safety significance. Specifically, the Technical Support Center ventilation system was degraded for a period of longer than seven days from the time of original discovery. In addition, the degradation was to the extent that key emergency response organization members may not have been able to perform their assigned plan functions without compensatory measures. The finding was determined to be cross cutting in the corrective action program aspect of the Problem Identification and Resolution cross-cutting area because the licensee failed to thoroughly evaluate repeated problems with the Technical Support Center ventilation system such that the causes of the problems were identified and addressed (P.1(c)).

Inspection Report# : [2008002](#) (*pdf*)

Occupational Radiation Safety

G

Significance: Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

WORKER NOT IN COMPLIANCE WITH TS 5.7.1 B RECEIVED AN ED DOSE-RATE ALARM WHEN HE INAPPROPRIATELY ENTERED A HRA OF THE PLANT DURING STEAM GENERATOR SET-UP WORK

Green. A self-revealing finding of very low safety significance and an associated NCV were identified for the licensee's failure to comply with Technical Specification 5.7.1.b for access control to high radiation areas of the plant. As a result of poor human performance, a contract radiation worker received an electronic dosimeter high dose-rate alarm while performing steam generator set-up activities, when he inappropriately entered a high radiation area of the plant on a non-high radiation area radiation work permit. As corrective actions, the licensee provided additional training to the individuals involved and reinforced the expectations for high radiation area access control.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation, in that the failure to implement controls for high radiation area entry may result in unplanned dose. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning; it did not involve an overexposure; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect of human performance in work control (H.3(b)).

Inspection Report# : [2008002](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE IMPLEMENTATION OF VHRA CONTROLS FOR THE C-SUMP IN U1R24

Green. A finding of very low safety significance and an associated Non-Cited Violation (NCV) was inspector-identified for the licensee's failure to adequately maintain sufficient controls over a posted very high radiation area (VHRA) during the spring 2006 Unit-1 refuel outage (U1R24) contrary to 10 CFR 20.1602 and station procedural requirements. Specifically, the licensee failed to maintain appropriate control of the C-sump (i.e., the thimble tube chase). The licensee has entered the issue into the corrective action program. Licensee corrective actions included reinforcing expectations for procedural compliance and revising the procedures to require the written permission of the plant manager for VHRA key issue.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect in the area of Human Performance associated with the aspect of work practices in procedural compliance (H.4.b).

Inspection Report# : [2007005](#) (*pdf*)

G

Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CONTROL OF VHRA KEYS IN U2R24

Green. A finding of very low safety significance and an associated NCV of Technical Specification 5.4.1 was inspector-identified for the licensee's failure to adequately implement radiation safety procedures concerning the 2006 Unit-2 refueling outage when the C-sump VHRA key was signed out by radiation protection (RP) supervision and possession of the key was transferred between individuals over multiple shifts. The licensee has entered the issue into the corrective action program. Licensee corrective actions for this issue included reinforcing expectations for procedural compliance and revising the procedures to ensure that the VHRA keys are maintained in the control of RP supervision, that possession is not transferred between personnel, and that VHRA keys are checked back in at the end of each shift.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The finding was determined to be of very low safety significance because the finding did not involve ALARA planning, collective dose was not a factor, it did not involve an overexposure, there was not a substantial potential for a worker overexposure, and the licensee's ability to assess worker dose was not compromised. . The cause of the finding is related to the cross-cutting area of Problem Identification and Resolution associated with the aspect of corrective action program specifically that the licensee takes appropriate corrective actions to address safety issues, commensurate with their significance (P.1.d).

Inspection Report# : [2007005](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : November 26, 2008

Prairie Island 2

4Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF CONTRACTORS TO FOLLOW WELDING PROCEDURES

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, in September 2008 for the failure of contractor welders to adhere to welding procedures during structural weld overlay (SWOL) repairs on a pressurizer surge nozzle. A review of the weld records indicated that the welders either failed to utilize the correct travel speeds in performing the SWOL or to accurately document relative travel speed settings as required by procedure, in order to ensure that the correct heat input (a welding essential variable) was maintained. The inspectors also identified that the welders failed to input the correct welding parameters into the welding controller for a portion of the overlay as required by procedure. This resulted in the heat input parameters being exceeded. Corrective actions for this issue included the removal and repair of the weld.

This finding was more than minor because if left uncorrected, it would have become a more significant safety concern. Specifically, the failure to control the heat input could have reduced the impact toughness of the pressurizer weldment such that it would be susceptible to brittle fracture. The finding was of very low safety significance (Gree) because the contractor subsequently addressed the programmed versus actual travel speed discrepancies and determined that the resulting heat inputs were bound by the welding procedure specifications' (WPS) parameters. Furthermore, the contractor repaired the surge nozzle as a result of using the incorrect welding parameters before returning Unit 2 to service. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because licensee personnel failed to ensure supervisory and management oversight of contractor activities such that nuclear safety was supported.

Inspection Report# : [2008005](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OPERATOR MANIPULATES INCORRECT COMPONENT DUE TO FAILURE TO FOLLOW PROCEDURES

One self-revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified on October 13, 2008, due to an operator's failure to follow procedures during refueling activities. The failure to follow procedures resulted in a loss of seal injection flow to the 11 reactor coolant pump due to the manipulation of a Unit 1 seal injection valve rather than a Unit 2 seal injection valve. Corrective actions for this issue included communicating this event to all Operations personnel, resetting the operations department's event free clock and providing additional training of the use of human performance tools.

The inspectors determined that this finding was more than minor because if left uncorrected, a continued failure to follow procedures could lead to the incorrect operation of additional plant equipment and become a more significant safety concern. The inspectors determined that this issue was of very low safety significance because the finding would not result in leakage that exceeded any TS limit and because the finding would not have affected other mitigation equipment. Specifically, the reactor coolant pumps were designed to be able to operate without seal injection flow for several hours as long as the component cooling water supply to the thermal barrier heat exchanger remained within allowable ranges. The inspectors concluded that this finding was cross cutting in the Human Performance, Decision Making area because the operator failed to use the systematic process for implementing procedures when deciding which valve needed to be manipulated.

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IDECREASE IN REACTOR POWER DUE TO FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, was self revealed on November 6, 2008, due to instrumentation and controls technicians failing to follow procedures during calibration of the power range nuclear instruments. The failure to follow procedures resulted in the uncontrolled movement of the Unit 2 control rods and a six percent reduction in reactor power. Corrective actions for this issue included removing the technicians' qualifications, conducting remedial training, performing a site wide stand down to reinforce procedure use and adherence, and providing additional oversight of control room activities for several days.

The inspectors determined that the finding was more than minor because it caused a plant transient and if left uncorrected, it would become a more significant safety concern that could result in additional plant transients, testing errors, and the failure to properly operate equipment. The inspectors determined that this finding was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the technicians failed to use the systematic process for implementing procedures to ensure that nuclear safety was maintained.

Inspection Report# : [2008005](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

RESPIRATOR QUALIFICATION DEFICIENCY RESULTS IN NON-COMPLIANCE WITH 10 CFR PART 50, APPENDIX R

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix R, Section J, on December 30, 2008, due to the licensee's failure to ensure that an alternate safe shutdown access path was provided with emergency lighting units that contained at least an 8-hour battery power supply. Corrective actions for this issue included ensuring that all personnel on shift were respirator qualified so that alternate safe shutdown access pathways would not need to be used.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to properly evaluate alternative safe shutdown access paths against regulatory requirements could become a more significant safety concern due to its potential impact on safely shutting down the plant following a fire. The inspectors determined that this finding was of very low safety significance due to its low exposure time and low degradation rating. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to make this safety-significant/risk-significant decision using a systematic process that included a review of the safe shutdown analysis timeline and input from fire protection personnel.

Inspection Report# : [2008005](#) (pdf)

Significance: SL-IV Dec 12, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation for Bulk Hydrogen Storage Facility

Severity Level IV. The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to perform a safety evaluation associated with installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water System from a postulated hydrogen tank explosion in the bulk storage facility located directly

above buried Circulating Water System return lines. The licensee stopped work on the installation of the bulk hydrogen facility and documented the NRC identified issues in the corrective action system. The inspectors' concerns also prompted the licensee to identify above ground Cooling Water System pipe in the nearby Turbine Building which had not been evaluated in the hydrogen blast analysis.

The finding was more than minor because the inspectors could not reasonably determine that this change would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situation." Specifically, the inspectors answered "No" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. The cause of the finding is related to the cross-cutting element of Human Performance, Decision Making, because the licensee failed to make conservative assumptions in decision making associated with the effects of a postulated hydrogen tank explosion (IMC 305, Section 06.07.c, Item H.1(b)).

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

LOAD SEQUENCER TEST PROCEDURE CONFLICTS WITH VENDOR MANUAL INFORMATION

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion V for the failure to ensure that the surveillance procedures used to test the safety related load sequencers included appropriate qualitative acceptance criteria. Specifically, the acceptance criteria specified in the procedure conflicted with vendor manual information and was less conservative. Corrective actions for this issue included revising the surveillance procedures to include the vendor manual information and implementing a comprehensive preventive maintenance program to improve the availability and reliability of the load sequencers.

This finding was more than minor because it was associated with the procedure quality and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, the finding affected the cornerstone objective of ensuring the availability and reliability of equipment to respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because it was not a design issue resulting in loss of operability or functionality, it did not result in a loss of safety function, it did not result in loss of safety function for a single train for greater than the allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that this finding was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions during the February 2007 decision that led to making the load sequencer surveillance procedure non-conservative (H.1(b)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Jul 09, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security Related Finding - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008006](#) (*pdf*)

Significance: SL-IV Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

USAR NOT UPDATED TO INCLUDE ANALYSES

Severity Level IV. The inspectors identified an Non-Cited Violation of 10 CFR 50.71, "Maintenance of records, making of reports," for the licensee's failure to adequately update the Prairie Island Nuclear Generating Plant Updated Safety Analysis Report (USAR) to include analyses performed in response to Generic Letter (GL) 2004-02. Title 10 CFR 50.71(e) requires, in part, that the USAR be revised to include the effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The Commission, through GL 2004-02, requested that licensees perform an evaluation of the Emergency Core Cooling Systems and its associated recirculation functions and, if appropriate, take additional actions to ensure system function. The licensee, in response to GL 2004-02, performed analyses of debris generation and transport, chemical effects, downstream effects, upstream effects, and strainer and other structural analysis, but did not update the safety analysis report to include those analyses.

This issue potentially impacted the NRC's ability to perform its regulatory function and therefore, it was evaluated using the traditional enforcement process. The inspectors determined that the finding was more than minor because of the potential to impact the regulatory process by using IMC 0612, Appendix B, "Issue Screening," dated September 20, 2007. Specifically, the failure to provide complete licensing and design basis information in the USAR could result in either the licensee making an inappropriate interpretation or the NRC making an inappropriate regulatory decision based on incomplete information in the USAR. This finding has a cross-cutting aspect in the area of human performance, work practices (H.4(c)) because the licensee did not ensure supervisory and management oversight of work activities such that nuclear safety was supported. Corrective actions included revising the USAR to reflect the analyses and submitting the updated information to the NRC.

Inspection Report# : [2008003](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

CONTROL ROD BENT DUE TO CONTRACTORS' FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an associated NCV of TS 5.4.1 was self revealed on October 9, 2008, due to the failure of contractor staff to follow procedures during refueling activities. This failure to follow procedures resulted in the insertion of a plug in a local leak rate testing port on the fuel transfer tube flange. The plug subsequently contacted a control rod located in a new fuel assembly and damaged the control rod while lifting the fuel assembly to a vertical position. Corrective actions for this issue included removing the plug, inspecting the fuel bundle and refueling equipment for damage, verifying the clearances between the fuel transfer tube flange and the upender basket, establishing a minimum design clearance between the fuel transfer tube flange and the top of a control rod, and using underwater cameras to ensure that clearances were maintained during fuel movement activities.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to follow procedures during refueling activities could lead to the unknown installation of other equipment and increase the potential of damaging reactor fuel and/or plant equipment; therefore become a more significant safety concern. The inspectors reviewed IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that this type of finding was unable to be evaluated using this Appendix. As a result, the inspectors submitted the finding for management evaluation using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." NRC Management reviewed the details of this issue and concluded that this finding was of very low safety significance because the insertion of the plug, and the subsequent contact between the plug and the control rod, did not result in damage to irradiated fuel. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, was maintained such that nuclear safety was supported.

Inspection Report# : [2008005](#) (*pdf*)

Emergency Preparedness

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN STAFF RESPIRATORY QUALIFICATIONS INCLUDING PERSONNEL QUALIFICATIONS NECESSARY FOR EMERGENCY RESPONSE DUTIES AS REQUIRED BY STATION PROCEDURES

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q) for the failure to maintain staff respiratory qualifications, including personnel qualifications necessary for emergency response duties, as required by station procedures. Specifically, the inspectors identified multiple instances over the last several years where station personnel, including those required to maintain their respiratory readiness necessary for emergency response functions, failed to maintain their qualifications current. The most recent instances being a fire brigade member standing duty without the necessary respiratory fit test and a reactor operator standing duty without the necessary respiratory protection training. Planned corrective actions included periodic reviews to identify respiratory protection qualification issues prior to expiration to ensure that impacted departments maintained compliance with station procedures until the next scheduled periodic review.

The issue was more than minor because it was chronic in nature and associated with the facilities/equipment attribute of the Emergency Preparedness Cornerstone. The inspectors determined that the issue affected the cornerstone objective to ensure adequate protection of plant emergency workers (and consequently the health and safety of the public in the event of a radiological emergency) should the workers be called upon to use the equipment. Since the finding did not represent a functional failure of the Planning Standard, and the workers who were required to use respiratory protective equipment were not qualified and/or trained to use that equipment, the finding was determined to be of very low safety significance (Green). The inspectors determined that this finding was cross-cutting in the area of Problem Identification and Resolution because the licensee failed to take appropriate corrective actions once the issue was identified (P.1(d)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

TSC VENTILATION ISSUES RESULTED IN INADEQUATE EMERGENCY RESPONSE FACILITY

Green. The inspectors identified a NCV of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain adequate emergency facilities to support emergency response. Specifically, the licensee failed to maintain control of the Technical Support Center ventilation system. As a result, the system was frequently found to be in a degraded condition that may not have provided adequate protection for emergency response personnel.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the SDP Phase 1 Screening Worksheet of IMC 0609, the inspectors applied Appendix B, "Emergency Preparedness Significance Determination Process," Section 4.8 and determined that this issue was of very low safety significance. Specifically, the Technical Support Center ventilation system was degraded for a period of longer than seven days from the time of original discovery. In addition, the degradation was to the extent that key emergency response organization members may not have been able to perform their assigned plan functions without compensatory measures. The finding was determined to be cross cutting in the corrective action program aspect of the Problem Identification and Resolution cross-cutting area because the licensee failed to thoroughly evaluate repeated problems with the Technical Support Center ventilation system such that the causes of the problems were identified and addressed (P.1(c)).

Occupational Radiation Safety

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

WORKER NOT IN COMPLIANCE WITH TS 5.7.1 B RECEIVED AN ED DOSE-RATE ALARM WHEN HE INAPPROPRIATELY ENTERED A HRA OF THE PLANT DURING STEAM GENERATOR SET-UP WORK

Green. A self-revealing finding of very low safety significance and an associated NCV were identified for the licensee's failure to comply with Technical Specification 5.7.1.b for access control to high radiation areas of the plant. As a result of poor human performance, a contract radiation worker received an electronic dosimeter high dose-rate alarm while performing steam generator set-up activities, when he inappropriately entered a high radiation area of the plant on a non-high radiation area radiation work permit. As corrective actions, the licensee provided additional training to the individuals involved and reinforced the expectations for high radiation area access control.

The finding was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and potentially affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation, in that the failure to implement controls for high radiation area entry may result in unplanned dose. The finding was determined to be of very low safety significance because the finding did not involve As-Low-As-Is-Reasonably-Achievable (ALARA) planning; it did not involve an overexposure; there was not a substantial potential for a worker overexposure; and the licensee's ability to assess worker dose was not compromised. The cause of the finding is related to a cross-cutting aspect of human performance in work control (H.3(b)).

Inspection Report# : [2008002](#) (pdf)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : April 07, 2009

Prairie Island 2

1Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE USE AND ADHERENCE PROCEDURE FOLLOWING RECEIPT OF ABNORMAL OPERATING PROCEDURE ENTRY CONDITION

The inspectors identified a finding of very low safety significance and a Non Cited Violation of Technical Specification 5.4.1 due to operations personnel failing to implement abnormal operating procedures following an unexpected control rod insertion on November 6, 2008. Corrective actions for this issue included revising licensed operator training and providing guidance to operations personnel on the need to enter abnormal operating procedures following the receipt of an entry condition.

The inspectors determined that this finding was more than minor because the failure to enter abnormal operating procedures to respond to unexpected conditions could result in incorrect actions being taken following a plant event (a more significant safety issue). The inspectors concluded that this issue was of very low safety significance because the finding was not a loss of coolant accident initiator, was not an external events initiator, and would not have resulted in both the likelihood of a reactor trip and that mitigating systems equipment would not have been available. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee had not effectively communicated expectations regarding procedural compliance following the receipt of an abnormal operating procedure entry condition (H.4(b)).

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF CONTRACTORS TO FOLLOW WELDING PROCEDURES

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, in September 2008 for the failure of contractor welders to adhere to welding procedures during structural weld overlay (SWOL) repairs on a pressurizer surge nozzle. A review of the weld records indicated that the welders either failed to utilize the correct travel speeds in performing the SWOL or to accurately document relative travel speed settings as required by procedure, in order to ensure that the correct heat input (a welding essential variable) was maintained. The inspectors also identified that the welders failed to input the correct welding parameters into the welding controller for a portion of the overlay as required by procedure. This resulted in the heat input parameters being exceeded. Corrective actions for this issue included the removal and repair of the weld.

This finding was more than minor because if left uncorrected, it would have become a more significant safety concern. Specifically, the failure to control the heat input could have reduced the impact toughness of the pressurizer weldment such that it would be susceptible to brittle fracture. The finding was of very low safety significance (Gree) because the contractor subsequently addressed the programmed versus actual travel speed discrepancies and determined that the resulting heat inputs were bound by the welding procedure specifications' (WPS) parameters. Furthermore, the contractor repaired the surge nozzle as a result of using the incorrect welding parameters before returning Unit 2 to service. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because licensee personnel failed to ensure supervisory and management oversight of contractor activities such that nuclear safety was supported.

Inspection Report# : [2008005](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OPERATOR MANIPULATES INCORRECT COMPONENT DUE TO FAILURE TO FOLLOW PROCEDURES

One self-revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified on October 13, 2008, due to an operator's failure to follow procedures during refueling activities. The failure to follow procedures resulted in a loss of seal injection flow to the 11 reactor coolant pump due to the manipulation of a Unit 1 seal injection valve rather than a Unit 2 seal injection valve. Corrective actions for this issue included communicating this event to all Operations personnel, resetting the operations department's event free clock and providing additional training of the use of human performance tools.

The inspectors determined that this finding was more than minor because if left uncorrected, a continued failure to follow procedures could lead to the incorrect operation of additional plant equipment and become a more significant safety concern. The inspectors determined that this issue was of very low safety significance because the finding would not result in leakage that exceeded any TS limit and because the finding would not have affected other mitigation equipment. Specifically, the reactor coolant pumps were designed to be able to operate without seal injection flow for several hours as long as the component cooling water supply to the thermal barrier heat exchanger remained within allowable ranges. The inspectors concluded that this finding was cross cutting in the Human Performance, Decision Making area because the operator failed to use the systematic process for implementing procedures when deciding which valve needed to be manipulated.

Inspection Report# : [2008005](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IDECREASE IN REACTOR POWER DUE TO FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, was self revealed on November 6, 2008, due to instrumentation and controls technicians failing to follow procedures during calibration of the power range nuclear instruments. The failure to follow procedures resulted in the uncontrolled movement of the Unit 2 control rods and a six percent reduction in reactor power. Corrective actions for this issue included removing the technicians' qualifications, conducting remedial training, performing a site wide stand down to reinforce procedure use and adherence, and providing additional oversight of control room activities for several days.

The inspectors determined that the finding was more than minor because it caused a plant transient and if left uncorrected, it would become a more significant safety concern that could result in additional plant transients, testing errors, and the failure to properly operate equipment. The inspectors determined that this finding was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the technicians failed to use the systematic process for implementing procedures to ensure that nuclear safety was maintained.

Inspection Report# : [2008005](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROTECT FIRE PROTECTION EQUIPMENT FROM EFFECTS OF EXTREME COLD TEMPERATURES

The inspectors identified a finding of very low safety significance on January 13, 2009, due to the fire protection

system pumps being unable to auto start, as designed, in response to a low fire header pressure condition. Corrective actions for this issue included unthawing the sensing line, verifying the screenhouse ventilation system's configuration, revising the normal screenhouse ventilation procedure to ensure that it provided guidance on shutting down the exhaust fans, and repairing several normal screenhouse ventilation system equipment deficiencies.

This finding was more than minor because if left uncorrected, the failure to protect mitigating systems equipment from the effects of extreme cold temperatures could result in the system failing to function when needed. The inspectors determined that this finding was of very low safety significance because it was assigned a low fire degradation rating as specified in the Fire Protection Significance Determination Process. This finding was determined to be cross-cutting in the Human Performance, Resources area because the licensee failed to have a complete and accurate normal screenhouse ventilation procedure to ensure that operation of the system would not result in the freezing of mitigating systems equipment during extreme cold weather conditions (H.2(c)). No violations of NRC requirements occurred because the fire pumps could have been started manually if needed and because the normal screenhouse ventilation system was nonsafety-related.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES DURING PERFORMANCE OF OPERABILITY EVALUATIONS

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement Procedure FP-OP OL-01, "Operability Determination", to assess the capability of the 122 Control Room Chilled Water Pump to meet its mission time following the discovery of increased pump vibrations. Corrective actions for this issue included revising the operability recommendation and repairing the degraded pump.

This finding was more than minor because, if left uncorrected, failure to adequately implement the operability procedure could result in safety-related components been incorrectly declared operable rather than inoperable or operable, but non-conforming (a more significant safety concern). This finding was of very low safety significance because the finding did not represent an actual loss of safety function of a single train for longer than its Technical Specification allowed outage time. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to validate the underlying assumptions made when determining the continued operability of a safety-related component (H.1(b)).

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO FOLLOW PROCEDURE DURING D5 POST-MAINTENANCE TESTING

The inspectors identified a finding of very low safety significance on February 25, 2009, due to operations and maintenance personnel failing to identify a turbocharger coolant vent line fretting condition during a D5 emergency diesel generator post-maintenance test or during previous D5 operations. The lack of identification resulted in D5 operating with degraded conditions prior to the fretting issue being evaluated in the corrective action program. Corrective actions for this issue included performing an ultrasonic examination of the fretted area in support of an evaluation to determine whether the pipe needed to be replaced prior to declaring the diesel generator operable. The licensee also documented the untimely identification of the issue within its corrective action program.

This finding was more than minor because if left uncorrected, the failure to identify, evaluate, and correct equipment issues could result in returning safety-related equipment to service with deficiencies that impact the ability of the equipment to perform its safety function (a more significant safety concern). The inspectors determined that the finding was of very low safety significance because it was not associated with an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors considered the finding to be cross-cutting in the Problem Identification and Resolution, Corrective Action Program

area because operations and maintenance personnel failed to identify this issue in a timely manner commensurate with its safety significance (P.1(a)). No violations of NRC requirements occurred because D5 was not operable at the time this issue was identified and corrective actions were taken before it became operable.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

RESPIRATOR QUALIFICATION DEFICIENCY RESULTS IN NON-COMPLIANCE WITH 10 CFR PART 50, APPENDIX R

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix R, Section J, on December 30, 2008, due to the licensee's failure to ensure that an alternate safe shutdown access path was provided with emergency lighting units that contained at least an 8-hour battery power supply.

Corrective actions for this issue included ensuring that all personnel on shift were respirator qualified so that alternate safe shutdown access pathways would not need to be used.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to properly evaluate alternative safe shutdown access paths against regulatory requirements could become a more significant safety concern due to its potential impact on safely shutting down the plant following a fire. The inspectors determined that this finding was of very low safety significance due to its low exposure time and low degradation rating. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to make this safety-significant/risk-significant decision using a systematic process that included a review of the safe shutdown analysis timeline and input from fire protection personnel.

Inspection Report# : [2008005](#) (*pdf*)

Significance: SL-IV Dec 12, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation for Bulk Hydrogen Storage Facility

Severity Level IV. The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to perform a safety evaluation associated with installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water System from a postulated hydrogen tank explosion in the bulk storage facility located directly above buried Circulating Water System return lines. The licensee stopped work on the installation of the bulk hydrogen facility and documented the NRC identified issues in the corrective action system. The inspectors' concerns also prompted the licensee to identify above ground Cooling Water System pipe in the nearby Turbine Building which had not been evaluated in the hydrogen blast analysis.

The finding was more than minor because the inspectors could not reasonably determine that this change would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situation." Specifically, the inspectors answered "No" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. The cause of the finding is related to the cross-cutting element of Human Performance, Decision Making, because the licensee failed to make conservative assumptions in decision making associated with the effects of a postulated hydrogen tank explosion (IMC 305, Section 06.07.c, Item H.1(b)).

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

LOAD SEQUENCER TEST PROCEDURE CONFLICTS WITH VENDOR MANUAL INFORMATION

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion V for the failure to ensure that the surveillance procedures used to test the safety related load sequencers included appropriate qualitative acceptance criteria. Specifically, the acceptance criteria specified in the procedure conflicted with vendor manual information and was less conservative. Corrective actions for this issue included revising the surveillance procedures to include the vendor manual information and implementing a comprehensive preventive maintenance program to improve the availability and reliability of the load sequencers.

This finding was more than minor because it was associated with the procedure quality and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, the finding affected the cornerstone objective of ensuring the availability and reliability of equipment to respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because it was not a design issue resulting in loss of operability or functionality, it did not result in a loss of safety function, it did not result in loss of safety function for a single train for greater than the allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that this finding was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions during the February 2007 decision that led to making the load sequencer surveillance procedure non-conservative (H.1(b)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Jul 09, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security Related Finding - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in respons to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this findng are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008006](#) (*pdf*)

Significance: SL-IV Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

USAR NOT UPDATED TO INCLUDE ANALYSES

Severity Level IV. The inspectors identified an Non-Cited Violation of 10 CFR 50.71, "Maintenance of records, making of reports," for the licensee's failure to adequately update the Prairie Island Nuclear Generating Plant Updated Safety Analysis Report (USAR) to include analyses performed in response to Generic Letter (GL) 2004-02. Title 10 CFR 50.71(e) requires, in part, that the USAR be revised to include the effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The Commission, through GL 2004-02, requested that licensees perform an evaluation of the Emergency Core Cooling Systems and its associated recirculation functions and, if appropriate, take additional actions to ensure system function. The licensee, in response to GL 2004-02, performed analyses of debris generation and transport, chemical effects, downstream effects, upstream effects, and strainer and other structural analysis, but did not update the safety analysis report to include those analyses.

This issue potentially impacted the NRC's ability to perform its regulatory function and therefore, it was evaluated using the traditional enforcement process. The inspectors determined that the finding was more than minor because of the potential to impact the regulatory process by using IMC 0612, Appendix B, "Issue Screening," dated September 20, 2007. Specifically, the failure to provide complete licensing and design basis information in the USAR could result in either the licensee making an inappropriate interpretation or the NRC making an inappropriate regulatory decision based on incomplete information in the USAR. This finding has a cross-cutting aspect in the area of human performance, work practices (H.4(c)) because the licensee did not ensure supervisory and management oversight of work activities such that nuclear safety was supported. Corrective actions included revising the USAR to reflect the analyses and submitting the updated information to the NRC.

Barrier Integrity

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

CONTROL ROD BENT DUE TO CONTRACTORS' FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an associated NCV of TS 5.4.1 was self revealed on October 9, 2008, due to the failure of contractor staff to follow procedures during refueling activities. This failure to follow procedures resulted in the insertion of a plug in a local leak rate testing port on the fuel transfer tube flange. The plug subsequently contacted a control rod located in a new fuel assembly and damaged the control rod while lifting the fuel assembly to a vertical position. Corrective actions for this issue included removing the plug, inspecting the fuel bundle and refueling equipment for damage, verifying the clearances between the fuel transfer tube flange and the upender basket, establishing a minimum design clearance between the fuel transfer tube flange and the top of a control rod, and using underwater cameras to ensure that clearances were maintained during fuel movement activities.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to follow procedures during refueling activities could lead to the unknown installation of other equipment and increase the potential of damaging reactor fuel and/or plant equipment; therefore become a more significant safety concern. The inspectors reviewed IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that this type of finding was unable to be evaluated using this Appendix. As a result, the inspectors submitted the finding for management evaluation using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." NRC Management reviewed the details of this issue and concluded that this finding was of very low safety significance because the insertion of the plug, and the subsequent contact between the plug and the control rod, did not result in damage to irradiated fuel. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, was maintained such that nuclear safety was supported.

Inspection Report# : [2008005](#) (pdf)

Emergency Preparedness

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN STAFF RESPIRATORY QUALIFICATIONS INCLUDING PERSONNEL QUALIFICATIONS NECESSARY FOR EMERGENCY RESPONSE DUTIES AS REQUIRED BY STATION PROCEDURES

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q) for the failure to maintain staff respiratory qualifications, including personnel qualifications necessary for emergency response duties, as required by station procedures. Specifically, the inspectors identified multiple instances over the last several years where station personnel, including those required to maintain their respiratory readiness necessary for emergency response functions, failed to maintain their qualifications current. The most recent instances being a fire brigade member standing duty without the necessary respiratory fit test and a reactor operator standing duty without the necessary respiratory protection training. Planned corrective actions included periodic reviews to identify respiratory protection qualification issues prior to expiration to ensure that impacted departments maintained compliance with station procedures until the next scheduled periodic review.

The issue was more than minor because it was chronic in nature and associated with the facilities/equipment attribute of the Emergency Preparedness Cornerstone. The inspectors determined that the issue affected the cornerstone objective to ensure adequate protection of plant emergency workers (and consequently the health and safety of the public in the event of a radiological emergency) should the workers be called upon to use the equipment. Since the finding did not represent a functional failure of the Planning Standard, and the workers who were required to use respiratory protective equipment were not qualified and/or trained to use that equipment, the finding was determined to be of very low safety significance (Green). The inspectors determined that this finding was cross-cutting in the area of Problem Identification and Resolution because the licensee failed to take appropriate corrective actions once the issue was identified (P.1(d)).

Inspection Report# : [2008004](#) (*pdf*)

Occupational Radiation Safety

Significance: **G** Jan 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Formal Job Planning to Evaluate the Radiological Hazards

An NRC-identified finding of very low safety significance with an associated Non-Cited Violation (NCV) of Technical Specification 5.4.1 was identified in the area of occupational radiation safety associated with the licensee's failure to perform adequate job planning to evaluate the radiological hazards, as required by station procedures. Specifically, the licensee failed to properly assess the radiological hazards to workers associated with the decontamination, demobilization and packaging of fuel sipping equipment on the refuel floor. This issue has been entered into the licensee's corrective action program and implemented corrective actions that include changes to procedures to include a holistic risk-based review of radiologically significant work.

The finding is more than minor because, given the radiological uncertainty of working with fuel handling equipment, if left uncorrected the finding could become a more significant safety concern. The finding was determined to be of very low safety significance because it did not involve unintended collective dose (ALARA planning); there was no overexposure, nor potential for overexposure; and the licensee's ability to assess dose was not compromised. Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)).

Inspection Report# : [2008009](#) (*pdf*)

Public Radiation Safety

Significance: **W** Jan 21, 2009

Identified By: NRC

Item Type: VIO Violation

Radioactive Material Shipment Package radiation Levels Exceeded

A self-revealing finding with an apparent violation of regulatory requirements was identified involving a failure of the licensee to properly radiologically characterize, prepare, and ship a package containing radioactive material in a manner that assured, under conditions normally incident to transport, conformance with Department of Transportation (DOT) radiation level limitations specified by 49 CFR 173.441(a), (i.e., 200 millirem per hour (mrem/h)) on any external surface of the package as required by 10 CFR 71.5 [and 49 CFR 173.441(a)]. Additionally, the licensee did not provide nor ensure that the individuals involved in preparing this shipment were trained and qualified for the task as specified by 49 CFR 172.704, "Training Requirements." The finding involved an October 29, 2008, radioactive material shipment, via an exclusive-use open transport vehicle that was determined to have radiation levels of 1630

mrem/h on the external surface of a package upon receipt at the shipping destination. As immediate corrective actions, the licensee suspended all radioactive shipment activities. The licensee entered this performance deficiency in their corrective action program; initiated a root cause evaluation; and initiated corrective measures, including various process improvements to prevent recurrence.

This finding is more than minor since it was associated with the Public Radiation Safety Cornerstone program and process attribute and affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials given that package radiation levels were elevated. Preliminarily, the significance of this finding is considered as having a substantial safety significance (Yellow), since the radiation level was greater than five times the limit (1000 mrem/h) but less than ten times the limit (2000 mrem/h) specified by the DOT regulatory requirement. Although the surface of the package with elevated radiation levels would not be routinely accessible to a member of the public during transport, that aspect was fortuitous and not the result of design nor package preparation by the licensee. The condition had the potential to adversely affect personnel who would normally receive the package or respond to an incident involving the package, with a reasonable expectation that the package conformed to DOT radiation limitations.

Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)). This finding is documented within the licensee's corrective action system as RCE 1157726.

Final determination letter issued May 6, 2009.

Inspection Report# : [2008009](#) (*pdf*)

Inspection Report# : [2009008](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : May 28, 2009

Prairie Island 2

2Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ENSURE TURBINE VALVE TESTING PROCEDURE WAS ADEQUATE

A self-revealed finding of very low safety significance was identified on May 9, 2009, due to operations personnel failing to ensure that procedures used to test the Unit 2 turbine stop valves provided adequate guidance regarding the valve position limiter setting. The failure to ensure that adequate guidance was provided prior to performing the turbine stop valve test resulted in a reactor coolant system transient and a seven percent reduction in reactor power. Corrective actions for this issue included revising the test procedure to ensure that guidance regarding the valve position limiter setting was adequate, providing additional training on the digital electro hydraulic control system to operations personnel, and re enforcing the human performance fundamentals.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone. In addition, the finding affected the cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. The inspectors concluded that this finding was of very low safety significance because it did not result in exceeding the Technical Specifications limit on reactor coolant system leakage, did not result in a total loss of safety function of a mitigating system, did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available, and it did not increase the likelihood of a fire or flood. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because operations personnel failed to use conservative assumptions in deciding how the valve position limiter operated. In addition, operations personnel failed to demonstrate that their proposed actions regarding the valve position limiter setting was safe (by reviewing design basis or training documents and/or requesting assistance from additional personnel) prior to performing the test. No violation of NRC requirements was identified because the turbine stop valves are non-safety related.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Combustible Materials Present Within Safety Related Fire Area

A finding of very low safety significance and associated NCV of License Condition 2.C.(4) was identified by the inspectors for the failure to minimize the use of combustible materials in a safety-related area. Specifically, the inspectors identified wooden tables in two diesel generator control rooms. The licensee entered the issue into their corrective action program and planned to replace the wood tables with metal tables.

The finding was determined to be more than minor because the inspectors' finding was similar to IMC 0612, Appendix E, Example 4.k. The combustible materials created a credible fire scenario that could affect equipment important to safety. The issue was of very low safety significance because the identified materials had a low likelihood of causing a fire from existing sources of heat or electrical energy.

Inspection Report# : [2009007](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE USE AND ADHERENCE PROCEDURE FOLLOWING RECEIPT OF ABNORMAL OPERATING PROCEDURE ENTRY CONDITION

The inspectors identified a finding of very low safety significance and a Non Cited Violation of Technical Specification 5.4.1 due to operations personnel failing to implement abnormal operating procedures following an unexpected control rod insertion on November 6, 2008. Corrective actions for this issue included revising licensed operator training and providing guidance to operations personnel on the need to enter abnormal operating procedures following the receipt of an entry condition.

The inspectors determined that this finding was more than minor because the failure to enter abnormal operating procedures to respond to unexpected conditions could result in incorrect actions being taken following a plant event (a more significant safety issue). The inspectors concluded that this issue was of very low safety significance because the finding was not a loss of coolant accident initiator, was not an external events initiator, and would not have resulted in both the likelihood of a reactor trip and that mitigating systems equipment would not have been available. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee had not effectively communicated expectations regarding procedural compliance following the receipt of an abnormal operating procedure entry condition (H.4(b)).

Inspection Report# : [2009002](#) (pdf)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF CONTRACTORS TO FOLLOW WELDING PROCEDURES

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, in September 2008 for the failure of contractor welders to adhere to welding procedures during structural weld overlay (SWOL) repairs on a pressurizer surge nozzle. A review of the weld records indicated that the welders either failed to utilize the correct travel speeds in performing the SWOL or to accurately document relative travel speed settings as required by procedure, in order to ensure that the correct heat input (a welding essential variable) was maintained. The inspectors also identified that the welders failed to input the correct welding parameters into the welding controller for a portion of the overlay as required by procedure. This resulted in the heat input parameters being exceeded. Corrective actions for this issue included the removal and repair of the weld.

This finding was more than minor because if left uncorrected, it would have become a more significant safety concern. Specifically, the failure to control the heat input could have reduced the impact toughness of the pressurizer weldment such that it would be susceptible to brittle fracture. The finding was of very low safety significance (Gree) because the contractor subsequently addressed the programmed versus actual travel speed discrepancies and determined that the resulting heat inputs were bound by the welding procedure specifications' (WPS) parameters. Furthermore, the contractor repaired the surge nozzle as a result of using the incorrect welding parameters before returning Unit 2 to service. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because licensee personnel failed to ensure supervisory and management oversight of contractor activities such that nuclear safety was supported.

Inspection Report# : [2008005](#) (pdf)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OPERATOR MANIPULATES INCORRECT COMPONENT DUE TO FAILURE TO FOLLOW PROCEDURES

One self-revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified on October 13, 2008, due to an operator's failure to follow procedures during refueling activities. The failure to follow procedures resulted in a loss of seal injection flow to the 11 reactor coolant pump due to the manipulation of a Unit 1 seal injection valve rather than a Unit 2 seal injection valve. Corrective actions for this issue

included communicating this event to all Operations personnel, resetting the operations department's event free clock and providing additional training of the use of human performance tools.

The inspectors determined that this finding was more than minor because if left uncorrected, a continued failure to follow procedures could lead to the incorrect operation of additional plant equipment and become a more significant safety concern. The inspectors determined that this issue was of very low safety significance because the finding would not result in leakage that exceeded any TS limit and because the finding would not have affected other mitigation equipment. Specifically, the reactor coolant pumps were designed to be able to operate without seal injection flow for several hours as long as the component cooling water supply to the thermal barrier heat exchanger remained within allowable ranges. The inspectors concluded that this finding was cross cutting in the Human Performance, Decision Making area because the operator failed to use the systematic process for implementing procedures when deciding which valve needed to be manipulated.

Inspection Report# : [2008005](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IDECREASE IN REACTOR POWER DUE TO FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, was self revealed on November 6, 2008, due to instrumentation and controls technicians failing to follow procedures during calibration of the power range nuclear instruments. The failure to follow procedures resulted in the uncontrolled movement of the Unit 2 control rods and a six percent reduction in reactor power. Corrective actions for this issue included removing the technicians' qualifications, conducting remedial training, performing a site wide stand down to reinforce procedure use and adherence, and providing additional oversight of control room activities for several days.

The inspectors determined that the finding was more than minor because it caused a plant transient and if left uncorrected, it would become a more significant safety concern that could result in additional plant transients, testing errors, and the failure to properly operate equipment. The inspectors determined that this finding was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the technicians failed to use the systematic process for implementing procedures to ensure that nuclear safety was maintained.

Inspection Report# : [2008005](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO POSITIVELY CONTROL COMPENSATORY MEASURES

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V on April 28, 2009, for failure to have adequate procedures to control compensatory actions for degraded/non-conforming conditions. Specifically the failure to implement positive controls for the Unit 2 roll-up door as a compensatory measure for an operability determination invalidated the determination. The door was discovered less than the 18"-open requirement which supported the flooding evaluation. Corrective actions for this issue included opening the Unit 2 turbine building roll-up door to greater than 18 inches open, implementing positive configuration controls for the compensatory measures, and revising the operability determination procedure to require the implementation of positive controls.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control compensatory measures could result in rendering equipment inoperable (a more significant safety concern). This finding was of very low safety significance because it was not a design or qualification deficiency, did not result

in a loss of system safety function or the loss of a single train for greater than the Technical Specification allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event since the roll-up door was 14 inches open and would have provided some mitigation following an internal flooding event. The inspectors determined that this issue was cross cutting in the Human Performance, Resources area because the licensee failed to ensure that the operability determination procedure was adequate in regards to the control of compensatory measures.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO CONTROL MAINTENANCE ACTIVITIES TO ENSURE PLANT EQUIPMENT IS NOT UNNECESSARILY CHALLENGED

A self-revealed finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V were identified on March 19, 2009, due to the failure to have adequate procedures to control maintenance activities to ensure that plant equipment was not unnecessarily challenged. Specifically, the failure to adequately control maintenance on the 12 diesel-driven cooling water pump resulted in the unplanned automatic start of the 121 motor-driven cooling water pump during post maintenance testing activities. Corrective actions for this issue included adding instructions to the post maintenance testing procedure to ensure that it properly referenced the procedure used to realign the 121 motor-driven cooling water pump. The licensee planned to complete a review of safety related preventive maintenance procedures to ensure that proper procedure referencing and branching was utilized. Lastly, the licensee will add additional staff to assist with the procedure upgrade program and the coordination of preventive maintenance activities.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control maintenance activities could become a more significant safety concern. In addition, the inspectors determined that the identification of this issue in conjunction with several other procedure upgrade project issues is reflective of a significant programmatic deficiency in coordination of maintenance and operations procedures. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors determined that this finding was cross-cutting in the Human Performance, Resources area because the licensee did not have complete, accurate and up to date procedures regarding testing of the 12 diesel-driven cooling water pump and realignment of the 121 motor-driven cooling water pump.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

23 INVERTER RENDERED INOPERABLE DURING TRAINING ACTIVITIES

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on February 27, 2009, due to operations personnel failing to adequately implement procedures which control safety related equipment. Specifically operations personnel, unintentionally, rendered the 23 instrument inverter inoperable during the performance of on the job training activities. Corrective actions for this issue included returning the 23 instrument inverter to an operable status, providing additional training on the use of human error prevention techniques to the apprentice plant attendant, and providing additional training on the instrument inverters.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially

significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because human error prevention techniques were not used to ensure that an on the job training activity was performed safely.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

22 BATTERY CHARGER RENDERED INOPERABLE DURING MAINTENANCE ON 22 INVERTER

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on April 26, 2009, due to maintenance personnel failing to implement procedures which control safety-related equipment. Specifically maintenance personnel did not comply with work order instructions or procedures, rendering the 22 battery charger inoperable during the performance of maintenance on the 22 instrument inverter. Corrective actions for this issue included issuing a stop work order and remediating the maintenance workers on human performance tool use.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because maintenance personnel did not follow procedures during this maintenance activity.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

122 AIR COMPRESSOR RENDERED NON-FUNCTIONAL DURING CLEARANCE ORDER ACTIVITIES

A self-revealed finding of very low safety significance was identified on April 30, 2009, due to operations personnel failing to implement procedures which control plant equipment. Specifically operations personnel operated the incorrect component, rendering the 122 air compressor non-functional during the performance of independent verification activities. Corrective actions for this issue included restoring the 122 air compressor to a functional status and briefing operations personnel on the details/lessons learned from this event.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for one or more non Technical Specification trains of equipment for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the operator failed to use conservative assumptions when making the decision regarding the need to operate breaker 121E 6, 1A2 B4. No violation of NRC requirements was identified because the air compressor was non-safety related.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to Ensure Fire door Would Consistently Close

A finding of very low safety significance was identified by the inspectors for the failure to ensure a fire door would consistently close. The licensee entered the issue into their corrective action program. This finding has a cross cutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective action to assure that the fire door would close and latch or equivalent corrective action.

The finding was determined to be more than minor because failure of the fire door to close could have allowed the propagation of a fire from one fire area to another fire area. The issue was of very low safety significance because mitigating systems for initiating events associated with a fire in the two areas would not be impacted.

Inspection Report# : [2009007](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROTECT FIRE PROTECTION EQUIPMENT FROM EFFECTS OF EXTREME COLD TEMPERATURES

The inspectors identified a finding of very low safety significance on January 13, 2009, due to the fire protection system pumps being unable to auto start, as designed, in response to a low fire header pressure condition. Corrective actions for this issue included unthawing the sensing line, verifying the greenhouse ventilation system's configuration, revising the normal greenhouse ventilation procedure to ensure that it provided guidance on shutting down the exhaust fans, and repairing several normal greenhouse ventilation system equipment deficiencies.

This finding was more than minor because if left uncorrected, the failure to protect mitigating systems equipment from the effects of extreme cold temperatures could result in the system failing to function when needed. The inspectors determined that this finding was of very low safety significance because it was assigned a low fire degradation rating as specified in the Fire Protection Significance Determination Process. This finding was determined to be cross-cutting in the Human Performance, Resources area because the licensee failed to have a complete and accurate normal greenhouse ventilation procedure to ensure that operation of the system would not result in the freezing of mitigating systems equipment during extreme cold weather conditions (H.2(c)). No violations of NRC requirements occurred because the fire pumps could have been started manually if needed and because the normal greenhouse ventilation system was nonsafety-related.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES DURING PERFORMANCE OF OPERABILITY EVALUATIONS

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement Procedure FP-OP OL-01, "Operability Determination", to assess the capability of the 122 Control Room Chilled Water Pump to meet its mission time following the discovery of increased pump vibrations. Corrective actions for this issue included revising the operability recommendation and repairing the degraded pump.

This finding was more than minor because, if left uncorrected, failure to adequately implement the operability procedure could result in safety-related components been incorrectly declared operable rather than inoperable or operable, but non-conforming (a more significant safety concern). This finding was of very low safety significance because the finding did not represent an actual loss of safety function of a single train for longer than its Technical Specification allowed outage time. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to validate the underlying assumptions made when determining the continued operability of a safety-related component (H.1(b)).

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO FOLLOW PROCEDURE DURING D5 POST-MAINTENANCE TESTING

The inspectors identified a finding of very low safety significance on February 25, 2009, due to operations and maintenance personnel failing to identify a turbocharger coolant vent line fretting condition during a D5 emergency diesel generator post-maintenance test or during previous D5 operations. The lack of identification resulted in D5 operating with degraded conditions prior to the fretting issue being evaluated in the corrective action program. Corrective actions for this issue included performing an ultrasonic examination of the fretted area in support of an evaluation to determine whether the pipe needed to be replaced prior to declaring the diesel generator operable. The licensee also documented the untimely identification of the issue within its corrective action program.

This finding was more than minor because if left uncorrected, the failure to identify, evaluate, and correct equipment issues could result in returning safety-related equipment to service with deficiencies that impact the ability of the equipment to perform its safety function (a more significant safety concern). The inspectors determined that the finding was of very low safety significance because it was not associated with an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors considered the finding to be cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because operations and maintenance personnel failed to identify this issue in a timely manner commensurate with its safety significance (P.1(a)). No violations of NRC requirements occurred because D5 was not operable at the time this issue was identified and corrective actions were taken before it became operable.

Inspection Report# : [2009002](#) (pdf)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

RESPIRATOR QUALIFICATION DEFICIENCY RESULTS IN NON-COMPLIANCE WITH 10 CFR PART 50, APPENDIX R

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix R, Section J, on December 30, 2008, due to the licensee's failure to ensure that an alternate safe shutdown access path was provided with emergency lighting units that contained at least an 8-hour battery power supply. Corrective actions for this issue included ensuring that all personnel on shift were respirator qualified so that alternate safe shutdown access pathways would not need to be used.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to properly evaluate alternative safe shutdown access paths against regulatory requirements could become a more significant safety concern due to its potential impact on safely shutting down the plant following a fire. The inspectors determined that this finding was of very low safety significance due to its low exposure time and low degradation rating. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to make this safety-significant/risk-significant decision using a systematic process that included a review of the safe shutdown analysis timeline and input from fire protection personnel.

Inspection Report# : [2008005](#) (pdf)

Significance: SL-IV Dec 12, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation for Bulk Hydrogen Storage Facility

Severity Level IV. The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to perform a safety evaluation associated with installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water System from a postulated hydrogen tank explosion in the bulk storage facility located directly above buried Circulating Water System return lines. The licensee stopped work on the installation of the bulk

hydrogen facility and documented the NRC identified issues in the corrective action system. The inspectors' concerns also prompted the licensee to identify above ground Cooling Water System pipe in the nearby Turbine Building which had not been evaluated in the hydrogen blast analysis.

The finding was more than minor because the inspectors could not reasonably determine that this change would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situation." Specifically, the inspectors answered "No" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. The cause of the finding is related to the cross-cutting element of Human Performance, Decision Making, because the licensee failed to make conservative assumptions in decision making associated with the effects of a postulated hydrogen tank explosion (IMC 305, Section 06.07.c, Item H.1(b)).

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

LOAD SEQUENCER TEST PROCEDURE CONFLICTS WITH VENDOR MANUAL INFORMATION

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion V for the failure to ensure that the surveillance procedures used to test the safety related load sequencers included appropriate qualitative acceptance criteria. Specifically, the acceptance criteria specified in the procedure conflicted with vendor manual information and was less conservative. Corrective actions for this issue included revising the surveillance procedures to include the vendor manual information and implementing a comprehensive preventive maintenance program to improve the availability and reliability of the load sequencers.

This finding was more than minor because it was associated with the procedure quality and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, the finding affected the cornerstone objective of ensuring the availability and reliability of equipment to respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because it was not a design issue resulting in loss of operability or functionality, it did not result in a loss of safety function, it did not result in loss of safety function for a single train for greater than the allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that this finding was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions during the February 2007 decision that led to making the load sequencer surveillance procedure non-conservative (H.1(b)).

Inspection Report# : [2008004](#) (*pdf*)

Significance:  Jul 09, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

This is a security Related Finding - see inspection report for details.

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information": therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance - Facilities & Equipment. See inspection report for more details.

Inspection Report# : [2008006](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

CONTROL ROD BENT DUE TO CONTRACTORS' FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an associated NCV of TS 5.4.1 was self revealed on October 9, 2008, due to the failure of contractor staff to follow procedures during refueling activities. This failure to follow procedures resulted in the insertion of a plug in a local leak rate testing port on the fuel transfer tube flange. The plug subsequently contacted a control rod located in a new fuel assembly and damaged the control rod while lifting the fuel assembly to a vertical position. Corrective actions for this issue included removing the plug, inspecting the fuel bundle and refueling equipment for damage, verifying the clearances between the fuel transfer tube flange and the upender basket, establishing a minimum design clearance between the fuel transfer tube flange and the top of a control rod, and using underwater cameras to ensure that clearances were maintained during fuel movement activities.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to follow procedures during refueling activities could lead to the unknown installation of other equipment and increase the potential of damaging reactor fuel and/or plant equipment; therefore become a more significant safety concern. The inspectors reviewed IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that this type of finding was unable to be evaluated using this Appendix. As a result, the inspectors submitted the finding for management evaluation using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." NRC Management reviewed the details of this issue and concluded that this finding was of very low safety significance because the insertion of the plug, and the subsequent contact between the plug and the control rod, did not result in damage to irradiated fuel. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, was maintained such that nuclear safety was supported.

Inspection Report# : [2008005](#) (*pdf*)

Emergency Preparedness

Significance:  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN STAFF RESPIRATORY QUALIFICATIONS INCLUDING PERSONNEL QUALIFICATIONS NECESSARY FOR EMERGENCY RESPONSE DUTIES AS REQUIRED BY STATION PROCEDURES

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q) for the failure to maintain staff respiratory qualifications, including personnel qualifications necessary for emergency response duties, as required by station procedures. Specifically, the inspectors identified multiple instances over the last several years where station personnel, including those required to maintain their respiratory readiness necessary for emergency response functions, failed to maintain their qualifications current. The most recent instances being a fire brigade member standing duty without the necessary respiratory fit test and a reactor operator standing duty without the necessary respiratory protection training. Planned corrective actions included periodic reviews to identify respiratory protection qualification issues prior to expiration to ensure that impacted departments maintained compliance with station procedures until the next scheduled periodic review.

The issue was more than minor because it was chronic in nature and associated with the facilities/equipment attribute of the Emergency Preparedness Cornerstone. The inspectors determined that the issue affected the cornerstone objective to ensure adequate protection of plant emergency workers (and consequently the health and safety of the public in the event of a radiological emergency) should the workers be called upon to use the equipment. Since the finding did not represent a functional failure of the Planning Standard, and the workers who were required to use

respiratory protective equipment were not qualified and/or trained to use that equipment, the finding was determined to be of very low safety significance (Green). The inspectors determined that this finding was cross-cutting in the area of Problem Identification and Resolution because the licensee failed to take appropriate corrective actions once the issue was identified (P.1(d)).

Inspection Report# : [2008004](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jan 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation


Failure to Perform Formal Job Planning to Evaluate the Radiological Hazards

An NRC-identified finding of very low safety significance with an associated Non-Cited Violation (NCV) of Technical Specification 5.4.1 was identified in the area of occupational radiation safety associated with the licensee's failure to perform adequate job planning to evaluate the radiological hazards, as required by station procedures. Specifically, the licensee failed to properly assess the radiological hazards to workers associated with the decontamination, demobilization and packaging of fuel sipping equipment on the refuel floor. This issue has been entered into the licensee's corrective action program and implemented corrective actions that include changes to procedures to include a holistic risk-based review of radiologically significant work.

The finding is more than minor because, given the radiological uncertainty of working with fuel handling equipment, if left uncorrected the finding could become a more significant safety concern. The finding was determined to be of very low safety significance because it did not involve unintended collective dose (ALARA planning); there was no overexposure, nor potential for overexposure; and the licensee's ability to assess dose was not compromised. Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)).

Inspection Report# : [2008009](#) (*pdf*)

Public Radiation Safety

Significance:  Jan 21, 2009

Identified By: NRC

Item Type: VIO Violation

Radioactive Material Shipment Package radiation Levels Exceeded

A self-revealing finding with an apparent violation of regulatory requirements was identified involving a failure of the licensee to properly radiologically characterize, prepare, and ship a package containing radioactive material in a manner that assured, under conditions normally incident to transport, conformance with Department of Transportation (DOT) radiation level limitations specified by 49 CFR 173.441(a), (i.e., 200 millirem per hour (mrem/h)) on any external surface of the package as required by 10 CFR 71.5 [and 49 CFR 173.441(a)]. Additionally, the licensee did not provide nor ensure that the individuals involved in preparing this shipment were trained and qualified for the task as specified by 49 CFR 172.704, "Training Requirements." The finding involved an October 29, 2008, radioactive material shipment, via an exclusive-use open transport vehicle that was determined to have radiation levels of 1630 mrem/h on the external surface of a package upon receipt at the shipping destination. As immediate corrective actions, the licensee suspended all radioactive shipment activities. The licensee entered this performance deficiency in their corrective action program; initiated a root cause evaluation; and initiated corrective measures, including various process improvements to prevent recurrence.

This finding is more than minor since it was associated with the Public Radiation Safety Cornerstone program and process attribute and affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials given that package radiation levels were elevated. Preliminarily, the significance of this finding is considered as having a substantial safety significance (Yellow), since the radiation level was greater than five times the limit (1000 mrem/h) but less than ten times the limit (2000 mrem/h) specified by the DOT regulatory requirement. Although the surface of the package with elevated radiation levels would not be routinely accessible to a member of the public during transport, that aspect was fortuitous and not the result of design nor package preparation by the licensee. The condition had the potential to adversely affect personnel who would normally receive the package or respond to an incident involving the package, with a reasonable expectation that the package conformed to DOT radiation limitations.

Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)). This finding is documented within the licensee's corrective action system as RCE 1157726.

Final determination letter issued May 6, 2009.

Inspection Report# : [2008009](#) (*pdf*)

Inspection Report# : [2009008](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 31, 2009

Prairie Island 2

3Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR HEATER DRAIN PUMP SWAPS

The inspectors identified a finding of very low significance and non-cited violation (NCV) of Technical Specification 5.4.1.a for the licensee failing to obtain a temporary or permanent procedure change, as required by their Procedure Use and Adherence procedure, prior to implementing a procedure when it was determined that they could not complete a required swap of two heater drain pumps using the applicable section of the appropriate operating procedure. Once identified, the licensee took actions to correct the issue and entered the issue into their corrective action program.

The inspectors determined the finding to be more than minor because if left uncorrected, this finding had the potential to lead to a more significant safety concern. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Phase 1 Worksheet for the Initiating Events Cornerstone. Since the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, the inspectors concluded that the finding was of very low safety significance. The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having work practices components, and involving aspects associated with personnel following procedures.

Inspection Report# : [2009009](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ENSURE TURBINE VALVE TESTING PROCEDURE WAS ADEQUATE

A self-revealed finding of very low safety significance was identified on May 9, 2009, due to operations personnel failing to ensure that procedures used to test the Unit 2 turbine stop valves provided adequate guidance regarding the valve position limiter setting. The failure to ensure that adequate guidance was provided prior to performing the turbine stop valve test resulted in a reactor coolant system transient and a seven percent reduction in reactor power. Corrective actions for this issue included revising the test procedure to ensure that guidance regarding the valve position limiter setting was adequate, providing additional training on the digital electro hydraulic control system to operations personnel, and re enforcing the human performance fundamentals.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone. In addition, the finding affected the cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. The inspectors concluded that this finding was of very low safety significance because it did not result in exceeding the Technical Specifications limit on reactor coolant system leakage, did not result in a total loss of safety function of a mitigating system, did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available, and it did not increase the likelihood of a fire or flood. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because operations personnel failed to use conservative assumptions in deciding how the valve position limiter operated. In addition, operations personnel failed to demonstrate that their proposed actions regarding the valve position limiter setting was safe (by reviewing design basis or training documents and/or requesting assistance from additional personnel) prior to performing the test. No violation of NRC requirements was identified because the turbine stop valves are non-safety related.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Combustible Materials Present Within Safety Related Fire Area

A finding of very low safety significance and associated NCV of License Condition 2.C.(4) was identified by the inspectors for the failure to minimize the use of combustible materials in a safety-related area. Specifically, the inspectors identified wooden tables in two diesel generator control rooms. The licensee entered the issue into their corrective action program and planned to replace the wood tables with metal tables.

The finding was determined to be more than minor because the inspectors' finding was similar to IMC 0612, Appendix E, Example 4.k. The combustible materials created a credible fire scenario that could affect equipment important to safety. The issue was of very low safety significance because the identified materials had a low likelihood of causing a fire from existing sources of heat or electrical energy.

Inspection Report# : [2009007](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE USE AND ADHERENCE PROCEDURE FOLLOWING RECEIPT OF ABNORMAL OPERATING PROCEDURE ENTRY CONDITION

The inspectors identified a finding of very low safety significance and a Non Cited Violation of Technical Specification 5.4.1 due to operations personnel failing to implement abnormal operating procedures following an unexpected control rod insertion on November 6, 2008. Corrective actions for this issue included revising licensed operator training and providing guidance to operations personnel on the need to enter abnormal operating procedures following the receipt of an entry condition.

The inspectors determined that this finding was more than minor because the failure to enter abnormal operating procedures to respond to unexpected conditions could result in incorrect actions being taken following a plant event (a more significant safety issue). The inspectors concluded that this issue was of very low safety significance because the finding was not a loss of coolant accident initiator, was not an external events initiator, and would not have resulted in both the likelihood of a reactor trip and that mitigating systems equipment would not have been available. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee had not effectively communicated expectations regarding procedural compliance following the receipt of an abnormal operating procedure entry condition (H.4(b)).

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF CONTRACTORS TO FOLLOW WELDING PROCEDURES

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, in September 2008 for the failure of contractor welders to adhere to welding procedures during structural weld overlay (SWOL) repairs on a pressurizer surge nozzle. A review of the weld records indicated that the welders either failed to utilize the correct travel speeds in performing the SWOL or to accurately document relative travel speed settings as required by procedure, in order to ensure that the correct heat input (a welding essential variable) was maintained. The inspectors also identified that the welders failed to input the correct welding parameters into the welding controller for a portion of the overlay as required by procedure. This resulted in the heat input parameters being exceeded. Corrective actions for this issue included the removal and repair of the weld.

This finding was more than minor because if left uncorrected, it would have become a more significant safety concern. Specifically, the failure to control the heat input could have reduced the impact toughness of the pressurizer weldment such that it would be susceptible to brittle fracture. The finding was of very low safety significance (Gree)

because the contractor subsequently addressed the programmed versus actual travel speed discrepancies and determined that the resulting heat inputs were bound by the welding procedure specifications' (WPS) parameters. Furthermore, the contractor repaired the surge nozzle as a result of using the incorrect welding parameters before returning Unit 2 to service. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because licensee personnel failed to ensure supervisory and management oversight of contractor activities such that nuclear safety was supported.

Inspection Report# : [2008005](#) (pdf)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OPERATOR MANIPULATES INCORRECT COMPONENT DUE TO FAILURE TO FOLLOW PROCEDURES

One self-revealed finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1 was identified on October 13, 2008, due to an operator's failure to follow procedures during refueling activities. The failure to follow procedures resulted in a loss of seal injection flow to the 11 reactor coolant pump due to the manipulation of a Unit 1 seal injection valve rather than a Unit 2 seal injection valve. Corrective actions for this issue included communicating this event to all Operations personnel, resetting the operations department's event free clock and providing additional training of the use of human performance tools.

The inspectors determined that this finding was more than minor because if left uncorrected, a continued failure to follow procedures could lead to the incorrect operation of additional plant equipment and become a more significant safety concern. The inspectors determined that this issue was of very low safety significance because the finding would not result in leakage that exceeded any TS limit and because the finding would not have affected other mitigation equipment. Specifically, the reactor coolant pumps were designed to be able to operate without seal injection flow for several hours as long as the component cooling water supply to the thermal barrier heat exchanger remained within allowable ranges. The inspectors concluded that this finding was cross cutting in the Human Performance, Decision Making area because the operator failed to use the systematic process for implementing procedures when deciding which valve needed to be manipulated.

Inspection Report# : [2008005](#) (pdf)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IDECREASE IN REACTOR POWER DUE TO FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, was self revealed on November 6, 2008, due to instrumentation and controls technicians failing to follow procedures during calibration of the power range nuclear instruments. The failure to follow procedures resulted in the uncontrolled movement of the Unit 2 control rods and a six percent reduction in reactor power. Corrective actions for this issue included removing the technicians' qualifications, conducting remedial training, performing a site wide stand down to reinforce procedure use and adherence, and providing additional oversight of control room activities for several days.

The inspectors determined that the finding was more than minor because it caused a plant transient and if left uncorrected, it would become a more significant safety concern that could result in additional plant transients, testing errors, and the failure to properly operate equipment. The inspectors determined that this finding was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the technicians failed to use the systematic process for implementing procedures to ensure that nuclear safety was maintained.

Inspection Report# : [2008005](#) (pdf)

Significance: **G** Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO QUALIFY SAFETY-RELATED MOLDED CASE CIRCUIT BREAKERS

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly correct a condition adverse to quality regarding the expired qualification of safety-related molded case circuit breakers. Specifically, the licensee failed to evaluate extending the service life of safety-related molded case circuit breakers beyond the 20 year life expectancy, a condition adverse to quality. The licensee entered this issue into its corrective action program.

The finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated December 4, 2008, because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, an unqualified safety-related molded case circuit breaker could lead to higher trip times and potential unavailability of safety-related components associated with the bus when a circuit fault is present. The finding screened as of very low safety significance because the finding was a qualification deficiency confirmed not to have resulted in loss of operability or functionality in service. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, operating experience, because the licensee failed to implement maintenance information through changes to station processes and procedures to address the qualification of the breakers from Vendor Technical Bulletin 06-2.

Inspection Report# : [2009009](#) (*pdf*)

Significance: **SL-III** Aug 10, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Provide Complete Information to the NRC which Impacted a Licensing Decision.

On May 11, 2009, while reviewing an application to incorporate a medical restriction into an SRO's operating license, an NRC inspector identified that Prairie Island Nuclear Generating Plant (PINGP) had provided incomplete and inaccurate information to the NRC when a license renewal was requested for the SRO in May 2007. The issue was considered to be of very low safety significance, but was considered to have important regulatory significance because the information was provided to the NRC under a signed statement and resulted in a licensing action that would not have been taken had complete and accurate information been provided to the NRC. This was an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information."

Because the issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The finding was determined to be of low safety significance because the licensed operator had taken medications as prescribed and had not made errors during any emergency condition prior to the license being amended.

However, the regulatory significance was important because the incomplete and inaccurate information was provided under a signed statement to the NRC and impacted a licensing decision for the licensed operator. This was preliminarily determined to be an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information." No cross-cutting element for this finding was assigned. This appears to be a misunderstanding of NRC reporting requirements since they changed in January 2006 and is not reflective of current plant standards or processes in this area.

Final Enforcement Action issued 10/27/09 with NOV as follows:

During an NRC inspection conducted on May 1, 2009, through August 10, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.9 requires, in part, that information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, Orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

10 CFR 55.23 requires, in part, that to certify the medical fitness of the applicant, an authorized representative of the

facility licensee shall complete and sign NRC Form 396, "Certification of Medical Examination by Facility Licensee." NRC Form 396, when signed by an authorized representative of the facility licensee, certifies that a physician conducted a medical examination of the applicant and that the guidance contained in American National Standards Institute/American Nuclear Society (ANSI/ANS) Standard 3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants" was followed in conducting the examination and making the determination of medical qualification. ANSI/ANS 3.4-1983, Section 5.3, provides, in part, that the presence of certain medical conditions, unless adequately compensated by the methods specified in Subsections 5.3.1 through 5.3.9, shall disqualify the individual.

Contrary to the above, on May 11, 2007, the facility licensee provided information to the NRC that was not complete and accurate in all material respects. Specifically, the licensee submitted an NRC Form 396 for renewal of a senior reactor operator's license which certified that the applicant met the medical requirements of ANSI/ANS 3.4 1983 with only a restriction for corrective lenses. However, in July 1998, the senior reactor operator was prescribed medication to adequately compensate for a disqualifying medical condition. The certification by the senior licensee facility representative was material to the NRC because the NRC relied upon this certification and renewed the senior reactor operator's license pursuant to 10 CFR Part 55 without a restriction that the senior reactor operator was required to take medication as prescribed to maintain his qualification.

This is a Severity Level III violation (Supplement VII).

Inspection Report# : [2009012](#) (*pdf*)

Inspection Report# : [2009014](#) (*pdf*)

W Jul 09, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure Design Measures Were Appropriately Established for the Unit 2 Component Cooling Water System

An inspector identified apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified due to the licensee's failure to establish design control measures to ensure that the design basis for the Unit 2 CCW system was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the safety related function of the CCW system was maintained following initiating events (such as high energy line break, seismic or tornado events) in the turbine building. This issue has been preliminarily determined to be of low to moderate safety significance (White). This issue was entered into the licensee's corrective action program as corrective action document 1145695. Upon identifying this issue, the licensee immediately declared the Unit 2 CCW system inoperable and entered Technical Specification 3.0.3. The Technical Specification was exited following the closure of several system isolation valves approximately 2 hours later. The closure of the isolation valves prevented the Unit 2 CCW system from being vulnerable to failure following events in the turbine building.

This finding was determined to be more than minor because it impacted the design control and external events aspects of the Mitigating Systems Cornerstone. The finding also impacted the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The initiating events in the turbine building could cause the CCW piping to fail. Loss of CCW inventory affects both trains of CCW based on the piping arrangement. The loss of both trains of CCW required a phase 3 significance determination. The results of the phase 3 assessment showed a delta core damage frequency of $3.2E-6$, White. The cause of this finding was related to the cross cutting element of Human Performance, Decision Making because the licensee failed to make safety significant and risk significant decisions using a systematic process to ensure that safety was maintained (H.1(a)). Since both the Unit 1 and Unit 2 cross-cutting aspects are from the same performance deficiency and are separated based on the risk determination, the aspect of H.1(a) counts as one cross-cutting aspect in this report. (Section 40A5.1).

Final SDP letter issued September 3, 2009, as a White violation.

Inspection Report# : [2009010](#) (*pdf*)

Inspection Report# : [2009013](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO POSITIVELY CONTROL COMPENSATORY MEASURES

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V on April 28, 2009, for failure to have adequate procedures to control compensatory actions for degraded/non-conforming conditions. Specifically the failure to implement positive controls for the Unit 2 roll-up door as a compensatory measure for an operability determination invalidated the determination. The door was discovered less than the 18"-open requirement which supported the flooding evaluation. Corrective actions for this issue included opening the Unit 2 turbine building roll-up door to greater than 18 inches open, implementing positive configuration controls for the compensatory measures, and revising the operability determination procedure to require the implementation of positive controls.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control compensatory measures could result in rendering equipment inoperable (a more significant safety concern). This finding was of very low safety significance because it was not a design or qualification deficiency, did not result in a loss of system safety function or the loss of a single train for greater than the Technical Specification allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event since the roll-up door was 14 inches open and would have provided some mitigation following an internal flooding event. The inspectors determined that this issue was cross cutting in the Human Performance, Resources area because the licensee failed to ensure that the operability determination procedure was adequate in regards to the control of compensatory measures.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO CONTROL MAINTENANCE ACTIVITIES TO ENSURE PLANT EQUIPMENT IS NOT UNNECESSARILY CHALLENGED

A self-revealed finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V were identified on March 19, 2009, due to the failure to have adequate procedures to control maintenance activities to ensure that plant equipment was not unnecessarily challenged. Specifically, the failure to adequately control maintenance on the 12 diesel-driven cooling water pump resulted in the unplanned automatic start of the 121 motor-driven cooling water pump during post maintenance testing activities. Corrective actions for this issue included adding instructions to the post maintenance testing procedure to ensure that it properly referenced the procedure used to realign the 121 motor-driven cooling water pump. The licensee planned to complete a review of safety related preventive maintenance procedures to ensure that proper procedure referencing and branching was utilized. Lastly, the licensee will add additional staff to assist with the procedure upgrade program and the coordination of preventive maintenance activities.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control maintenance activities could become a more significant safety concern. In addition, the inspectors determined that the identification of this issue in conjunction with several other procedure upgrade project issues is reflective of a significant programmatic deficiency in coordination of maintenance and operations procedures. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors determined that this finding was cross-cutting in the Human Performance, Resources area because the licensee did not have complete, accurate and up to date procedures regarding testing of the 12 diesel-driven cooling water pump and realignment of the 121 motor-driven cooling water pump.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing
Item Type: NCV NonCited Violation

23 INVERTER RENDERED INOPERABLE DURING TRAINING ACTIVITIES

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on February 27, 2009, due to operations personnel failing to adequately implement procedures which control safety related equipment. Specifically operations personnel, unintentionally, rendered the 23 instrument inverter inoperable during the performance of on the job training activities. Corrective actions for this issue included returning the 23 instrument inverter to an operable status, providing additional training on the use of human error prevention techniques to the apprentice plant attendant, and providing additional training on the instrument inverters.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because human error prevention techniques were not used to ensure that an on the job training activity was performed safely.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing
Item Type: NCV NonCited Violation

22 BATTERY CHARGER RENDERED INOPERABLE DURING MAINTENANCE ON 22 INVERTER

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on April 26, 2009, due to maintenance personnel failing to implement procedures which control safety-related equipment. Specifically maintenance personnel did not comply with work order instructions or procedures, rendering the 22 battery charger inoperable during the performance of maintenance on the 22 instrument inverter. Corrective actions for this issue included issuing a stop work order and remediating the maintenance workers on human performance tool use.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because maintenance personnel did not follow procedures during this maintenance activity.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing
Item Type: FIN Finding

122 AIR COMPRESSOR RENDERED NON-FUNCTIONAL DURING CLEARANCE ORDER ACTIVITIES

A self-revealed finding of very low safety significance was identified on April 30, 2009, due to operations personnel failing to implement procedures which control plant equipment. Specifically operations personnel operated the incorrect component, rendering the 122 air compressor non-functional during the performance of independent verification activities. Corrective actions for this issue included restoring the 122 air compressor to a functional status and briefing operations personnel on the details/lessons learned from this event.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for one or more non Technical Specification trains of equipment for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the operator failed to use conservative assumptions when making the decision regarding the need to operate breaker 121E 6, 1A2 B4. No violation of NRC requirements was identified because the air compressor was non-safety related.

Inspection Report# : [2009003](#) (pdf)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to Ensure Fire door Would Consistently Close

A finding of very low safety significance was identified by the inspectors for the failure to ensure a fire door would consistently close. The licensee entered the issue into their corrective action program. This finding has a cross cutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective action to assure that the fire door would close and latch or equivalent corrective action.

The finding was determined to be more than minor because failure of the fire door to close could have allowed the propagation of a fire from one fire area to another fire area. The issue was of very low safety significance because mitigating systems for initiating events associated with a fire in the two areas would not be impacted.

Inspection Report# : [2009007](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROTECT FIRE PROTECTION EQUIPMENT FROM EFFECTS OF EXTREME COLD TEMPERATURES

The inspectors identified a finding of very low safety significance on January 13, 2009, due to the fire protection system pumps being unable to auto start, as designed, in response to a low fire header pressure condition. Corrective actions for this issue included unthawing the sensing line, verifying the screenhouse ventilation system's configuration, revising the normal screenhouse ventilation procedure to ensure that it provided guidance on shutting down the exhaust fans, and repairing several normal screenhouse ventilation system equipment deficiencies.

This finding was more than minor because if left uncorrected, the failure to protect mitigating systems equipment from the effects of extreme cold temperatures could result in the system failing to function when needed. The inspectors determined that this finding was of very low safety significance because it was assigned a low fire degradation rating as specified in the Fire Protection Significance Determination Process. This finding was determined to be cross-cutting in the Human Performance, Resources area because the licensee failed to have a complete and accurate normal screenhouse ventilation procedure to ensure that operation of the system would not result in the freezing of mitigating systems equipment during extreme cold weather conditions (H.2(c)). No violations of NRC requirements occurred because the fire pumps could have been started manually if needed and because the normal screenhouse ventilation system was nonsafety-related.

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES DURING PERFORMANCE OF OPERABILITY EVALUATIONS

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement Procedure FP-OP OL-01, "Operability Determination", to assess the capability of the 122 Control Room Chilled Water Pump to meet its mission time following the discovery of increased pump vibrations. Corrective actions for this issue included revising the operability recommendation and repairing the degraded pump.

This finding was more than minor because, if left uncorrected, failure to adequately implement the operability procedure could result in safety-related components been incorrectly declared operable rather than inoperable or operable, but non-conforming (a more significant safety concern). This finding was of very low safety significance because the finding did not represent an actual loss of safety function of a single train for longer than its Technical Specification allowed outage time. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to validate the underlying assumptions made when determining the continued operability of a safety-related component (H.1(b)).

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO FOLLOW PROCEDURE DURING D5 POST-MAINTENANCE TESTING

The inspectors identified a finding of very low safety significance on February 25, 2009, due to operations and maintenance personnel failing to identify a turbocharger coolant vent line fretting condition during a D5 emergency diesel generator post-maintenance test or during previous D5 operations. The lack of identification resulted in D5 operating with degraded conditions prior to the fretting issue being evaluated in the corrective action program. Corrective actions for this issue included performing an ultrasonic examination of the fretted area in support of an evaluation to determine whether the pipe needed to be replaced prior to declaring the diesel generator operable. The licensee also documented the untimely identification of the issue within its corrective action program.

This finding was more than minor because if left uncorrected, the failure to identify, evaluate, and correct equipment issues could result in returning safety-related equipment to service with deficiencies that impact the ability of the equipment to perform its safety function (a more significant safety concern). The inspectors determined that the finding was of very low safety significance because it was not associated with an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors considered the finding to be cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because operations and maintenance personnel failed to identify this issue in a timely manner commensurate with its safety significance (P.1(a)). No violations of NRC requirements occurred because D5 was not operable at the time this issue was identified and corrective actions were taken before it became operable.

Inspection Report# : [2009002](#) (*pdf*)

Significance:  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

RESPIRATOR QUALIFICATION DEFICIENCY RESULTS IN NON-COMPLIANCE WITH 10 CFR PART 50, APPENDIX R

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix R, Section J, on December 30, 2008, due to the licensee's failure to ensure that an alternate safe shutdown access path was provided with emergency lighting units that contained at least an 8-hour battery power supply. Corrective actions for this issue included ensuring that all personnel on shift were respirator qualified so that alternate safe shutdown access pathways would not need to be used.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to properly evaluate alternative safe shutdown access paths against regulatory requirements could become a more significant safety concern due to its potential impact on safely shutting down the plant following a fire. The inspectors determined that this finding was of very low safety significance due to its low exposure time and low degradation rating. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area

because the licensee failed to make this safety-significant/risk-significant decision using a systematic process that included a review of the safe shutdown analysis timeline and input from fire protection personnel.

Inspection Report# : [2008005](#) (*pdf*)

Significance: SL-IV Dec 12, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation for Bulk Hydrogen Storage Facility

Severity Level IV. The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, “Changes, Tests, and Experiments,” for the licensee’s failure to perform a safety evaluation associated with installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water System from a postulated hydrogen tank explosion in the bulk storage facility located directly above buried Circulating Water System return lines. The licensee stopped work on the installation of the bulk hydrogen facility and documented the NRC identified issues in the corrective action system. The inspectors’ concerns also prompted the licensee to identify above ground Cooling Water System pipe in the nearby Turbine Building which had not been evaluated in the hydrogen blast analysis.

The finding was more than minor because the inspectors could not reasonably determine that this change would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, “Significance Determination of Reactor Inspection Findings for At-Power Situation.” Specifically, the inspectors answered “No” to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. The cause of the finding is related to the cross-cutting element of Human Performance, Decision Making, because the licensee failed to make conservative assumptions in decision making associated with the effects of a postulated hydrogen tank explosion (IMC 305, Section 06.07.c, Item H.1(b)).

Inspection Report# : [2008007](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

CONTROL ROD BENT DUE TO CONTRACTORS' FAILURE TO FOLLOW PROCEDURES

A finding of very low safety significance and an associated NCV of TS 5.4.1 was self revealed on October 9, 2008, due to the failure of contractor staff to follow procedures during refueling activities. This failure to follow procedures resulted in the insertion of a plug in a local leak rate testing port on the fuel transfer tube flange. The plug subsequently contacted a control rod located in a new fuel assembly and damaged the control rod while lifting the fuel assembly to a vertical position. Corrective actions for this issue included removing the plug, inspecting the fuel bundle and refueling equipment for damage, verifying the clearances between the fuel transfer tube flange and the upender basket, establishing a minimum design clearance between the fuel transfer tube flange and the top of a control rod, and using underwater cameras to ensure that clearances were maintained during fuel movement activities.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to follow procedures during refueling activities could lead to the unknown installation of other equipment and increase the potential of damaging reactor fuel and/or plant equipment; therefore become a more significant safety concern. The inspectors reviewed IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” and determined that this type of finding was unable to be evaluated using this Appendix. As a result, the inspectors submitted the finding for management evaluation using IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” NRC Management reviewed the details of this issue and concluded that this finding was of very low safety significance because the insertion of the plug, and the subsequent contact between the plug and the control rod, did not result in damage to irradiated fuel. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management

Emergency Preparedness

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE TECHNICAL SUPPORT CENTER VENTILATION SYSTEM TESTING

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain the portion of the emergency plan in effect regarding the adequate maintenance of the Technical Support Center (TSC) emergency facility. Specifically, the implementation of procedure steps in Surveillance Procedure (SP) 1689, "TSC Ventilation System Operability Check," on January 25, 2009, resulted in the licensee's failure to test the TSC ventilation system in its as-found condition. As a result, the TSC ventilation system and an emergency preparedness planning standard were unknowingly degraded between July 26, 2008, and January 25, 2009. Corrective actions for this issue included ensuring that the TSC ventilation system was appropriately tested in July 2009 and revising SP 1689 to ensure that the TSC ventilation system was appropriately tested in the future.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors used Section 4.8 of the Emergency Preparedness Significance Determination Process and concluded that this finding was of very low safety significance, because the associated emergency preparedness planning standard was not lost. The finding was determined to be cross-cutting in the area of Human Performance, Resources because procedure SP 1689 was not complete and accurate.

Inspection Report# : [2009009](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jan 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Formal Job Planning to Evaluate the Radiological Hazards

An NRC-identified finding of very low safety significance with an associated Non-Cited Violation (NCV) of Technical Specification 5.4.1 was identified in the area of occupational radiation safety associated with the licensee's failure to perform adequate job planning to evaluate the radiological hazards, as required by station procedures. Specifically, the licensee failed to properly assess the radiological hazards to workers associated with the decontamination, demobilization and packaging of fuel sipping equipment on the refuel floor. This issue has been entered into the licensee's corrective action program and implemented corrective actions that include changes to procedures to include a holistic risk-based review of radiologically significant work.

The finding is more than minor because, given the radiological uncertainty of working with fuel handling equipment, if left uncorrected the finding could become a more significant safety concern. The finding was determined to be of very low safety significance because it did not involve unintended collective dose (ALARA planning); there was no overexposure, nor potential for overexposure; and the licensee's ability to assess dose was not compromised. Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)).

Inspection Report# : [2008009](#) (*pdf*)

Public Radiation Safety

Significance: **W** Jan 21, 2009

Identified By: NRC

Item Type: VIO Violation

Radioactive Material Shipment Package radiation Levels Exceeded

A self-revealing finding with an apparent violation of regulatory requirements was identified involving a failure of the licensee to properly radiologically characterize, prepare, and ship a package containing radioactive material in a manner that assured, under conditions normally incident to transport, conformance with Department of Transportation (DOT) radiation level limitations specified by 49 CFR 173.441(a), (i.e., 200 millirem per hour (mrem/h)) on any external surface of the package as required by 10 CFR 71.5 [and 49 CFR 173.441(a)]. Additionally, the licensee did not provide nor ensure that the individuals involved in preparing this shipment were trained and qualified for the task as specified by 49 CFR 172.704, "Training Requirements." The finding involved an October 29, 2008, radioactive material shipment, via an exclusive-use open transport vehicle that was determined to have radiation levels of 1630 mrem/h on the external surface of a package upon receipt at the shipping destination. As immediate corrective actions, the licensee suspended all radioactive shipment activities. The licensee entered this performance deficiency in their corrective action program; initiated a root cause evaluation; and initiated corrective measures, including various process improvements to prevent recurrence.

This finding is more than minor since it was associated with the Public Radiation Safety Cornerstone program and process attribute and affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials given that package radiation levels were elevated. Preliminarily, the significance of this finding is considered as having a substantial safety significance (Yellow), since the radiation level was greater than five times the limit (1000 mrem/h) but less than ten times the limit (2000 mrem/h) specified by the DOT regulatory requirement. Although the surface of the package with elevated radiation levels would not be routinely accessible to a member of the public during transport, that aspect was fortuitous and not the result of design nor package preparation by the licensee. The condition had the potential to adversely affect personnel who would normally receive the package or respond to an incident involving the package, with a reasonable expectation that the package conformed to DOT radiation limitations.

Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)). This finding is documented within the licensee's corrective action system as RCE 1157726.

Final determination letter issued May 6, 2009.

Inspection Report# : [2008009](#) (*pdf*)

Inspection Report# : [2009008](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 13, 2009

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

On the basis of the information reviewed, the team concluded that the corrective action (CA) program at Prairie Island was functional, but implementation was lacking in rigor resulting in inconsistent and undesirable results. In general, the licensee had a low threshold for identifying problems (issue reports called CAPs) and entering them in the CA program; however, some significant issues went unrecognized and therefore CAPs were not issued for these. Most items entered into the CA program were screened and prioritized in a timely manner using established criteria; however, inspectors observed inconsistency and lack of rigor in the screening process. Most issues, including operating experience, were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, the inspectors identified significant examples of issues with evaluation and corrective action shortcomings that resulted in inspection findings. The backlog of corrective actions was large and growing. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies, but the station was not taking full advantage of the processes and results. On the basis of interviews conducted during the inspection, and a review of the employee concerns program, workers at the site were willing to enter safety concerns into the CA program.

Inspectors continued to have concerns with the performance of the corrective action program. The last biennial problem identification and resolution inspection in 2007 was critical of program implementation and weaknesses were recognized by the licensee. An improvement effort was initiated. At the time of this inspection, inspectors concluded that performance had declined and another improvement plan was in progress. The current improvement program was not yet fully implemented and effective.

Inspection Report# : [2009009](#) (*pdf*)

Last modified : December 10, 2009

Prairie Island 2

4Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR HEATER DRAIN PUMP SWAPS

The inspectors identified a finding of very low significance and non-cited violation (NCV) of Technical Specification 5.4.1.a for the licensee failing to obtain a temporary or permanent procedure change, as required by their Procedure Use and Adherence procedure, prior to implementing a procedure when it was determined that they could not complete a required swap of two heater drain pumps using the applicable section of the appropriate operating procedure. Once identified, the licensee took actions to correct the issue and entered the issue into their corrective action program.

The inspectors determined the finding to be more than minor because if left uncorrected, this finding had the potential to lead to a more significant safety concern. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Phase 1 Worksheet for the Initiating Events Cornerstone. Since the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, the inspectors concluded that the finding was of very low safety significance. The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having work practices components, and involving aspects associated with personnel following procedures.

Inspection Report# : [2009009](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ENSURE TURBINE VALVE TESTING PROCEDURE WAS ADEQUATE

A self-revealed finding of very low safety significance was identified on May 9, 2009, due to operations personnel failing to ensure that procedures used to test the Unit 2 turbine stop valves provided adequate guidance regarding the valve position limiter setting. The failure to ensure that adequate guidance was provided prior to performing the turbine stop valve test resulted in a reactor coolant system transient and a seven percent reduction in reactor power. Corrective actions for this issue included revising the test procedure to ensure that guidance regarding the valve position limiter setting was adequate, providing additional training on the digital electro hydraulic control system to operations personnel, and re enforcing the human performance fundamentals.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone. In addition, the finding affected the cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. The inspectors concluded that this finding was of very low safety significance because it did not result in exceeding the Technical Specifications limit on reactor coolant system leakage, did not result in a total loss of safety function of a mitigating system, did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available, and it did not increase the likelihood of a fire or flood. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because operations personnel failed to use conservative assumptions in deciding how the valve position limiter operated. In addition, operations personnel failed to demonstrate that their proposed actions regarding the valve position limiter setting was safe (by reviewing design basis or training documents and/or requesting assistance from additional personnel) prior to performing the test. No violation of NRC requirements was identified because the turbine stop valves are non-safety related.

Inspection Report# : [2009003](#) (*pdf*)

Significance: **G** Apr 24, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Combustible Materials Present Within Safety Related Fire Area

A finding of very low safety significance and associated NCV of License Condition 2.C.(4) was identified by the inspectors for the failure to minimize the use of combustible materials in a safety-related area. Specifically, the inspectors identified wooden tables in two diesel generator control rooms. The licensee entered the issue into their corrective action program and planned to replace the wood tables with metal tables.

The finding was determined to be more than minor because the inspectors' finding was similar to IMC 0612, Appendix E, Example 4.k. The combustible materials created a credible fire scenario that could affect equipment important to safety. The issue was of very low safety significance because the identified materials had a low likelihood of causing a fire from existing sources of heat or electrical energy.

Inspection Report# : [2009007](#) (pdf)

Significance: **G** Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE USE AND ADHERENCE PROCEDURE FOLLOWING RECEIPT OF ABNORMAL OPERATING PROCEDURE ENTRY CONDITION

The inspectors identified a finding of very low safety significance and a Non Cited Violation of Technical Specification 5.4.1 due to operations personnel failing to implement abnormal operating procedures following an unexpected control rod insertion on November 6, 2008. Corrective actions for this issue included revising licensed operator training and providing guidance to operations personnel on the need to enter abnormal operating procedures following the receipt of an entry condition.

The inspectors determined that this finding was more than minor because the failure to enter abnormal operating procedures to respond to unexpected conditions could result in incorrect actions being taken following a plant event (a more significant safety issue). The inspectors concluded that this issue was of very low safety significance because the finding was not a loss of coolant accident initiator, was not an external events initiator, and would not have resulted in both the likelihood of a reactor trip and that mitigating systems equipment would not have been available. The inspectors determined that this finding was cross-cutting in the Human Performance, Work Practices area because the licensee had not effectively communicated expectations regarding procedural compliance following the receipt of an abnormal operating procedure entry condition (H.4(b)).

Inspection Report# : [2009002](#) (pdf)

Mitigating Systems

Significance: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION FOR LER 05000306/2008-001-00

A NRC-identified issue and a NCV of 10 CFR 50.9 was identified when the inspectors discovered that Licensee Event Report (LER) 05000306/2008-001-00 was not complete and accurate in all material aspects. Specifically, the LER omitted information regarding when and how the licensee became aware that the Unit 2 component cooling water system was susceptible to failure following a postulated high energy line break in the turbine building. The omitted information was considered to be material to the NRC because it potentially affected the NRC's determination as to whether this issue would be characterized as an old design issue per Inspection Manual Chapter 0305. Subsequent to discovery of the deficiency, the licensee submitted Revision 1 to LER 05000306/2008-001 00, on January 19, 2009, which documented the originally omitted information.

This issue was determined to be more than minor because it affected the NRC's ability to perform its regulatory function. As a result, this finding was evaluated with the traditional enforcement process. Using the information provided in IMC 0612, Appendix B, "Issue Screening," this issue was determined to be a Severity Level IV NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This finding was determined to be cross cutting in the Human Performance, Work Control area, because the licensee failed to properly plan and coordinate work activities to address the impact of work on different job activities and the need for groups to communicate, coordinate, and cooperate with others during work activities (H.3(b)).

Inspection Report# : [2009005](#) (pdf)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE RESULTS IN FAILURE TO IDENTIFY ADVERSE TREND REGARDING COOLING WATER PUMP RIGHT ANGLE DRIVE FOULING

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50 Appendix B, Criterion V, due to the licensee's failure to accomplish an activity affecting quality in accordance with procedures. Specifically, licensee personnel failed to identify repeated blocking of the diesel-driven cooling water pumps right angle drive gear oil coolers with debris as an adverse trend even though blockages had been identified four times between July 2005 and August 2009. As a result, the adverse trend was not characterized as a significant condition adverse to quality as required by Procedure FP PA ARP 01, "Corrective Action Program Action Request Process." The failure to identify this issue as an adverse trend and a significant condition adverse to quality resulted in the untimely implementation of corrective actions to prevent recurrence and contributed to the August 27, 2009, inoperability of the 12 diesel-driven cooling water pumps. Corrective actions for this issue included the continued installation of ultrasonic flow meters to monitor flow to the right angle drive gear oil coolers and the implementation of a modification to strain the cooling water flow to the right angle drive gear oil coolers prior to performing the next zebra mussel treatment.

The finding was more than minor because the failure to properly implement the corrective action procedure impacted the equipment performance attribute of the Mitigating Systems cornerstone and the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because it did not involve a loss of safety function of a single train for greater than technical specification allowed outage time, did not involve a loss of system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to appropriately use systematic processes (i.e., the corrective action, engineering change, and the preventive maintenance processes) when making safety significant decisions regarding the repeated blockage of the right angle drive gear oil coolers (H.1(a)).

Inspection Report# : [2009005](#) (pdf)

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO QUALIFY SAFETY-RELATED MOLDED CASE CIRCUIT BREAKERS

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly correct a condition adverse to quality regarding the expired qualification of safety-related molded case circuit breakers. Specifically, the licensee failed to evaluate extending the service life of safety-related molded case circuit breakers beyond the 20 year life expectancy, a condition adverse to quality. The licensee entered this issue into its corrective action program.

The finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated December 4, 2008, because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, an unqualified

safety-related molded case circuit breaker could lead to higher trip times and potential unavailability of safety-related components associated with the bus when a circuit fault is present. The finding screened as of very low safety significance because the finding was a qualification deficiency confirmed not to have resulted in loss of operability or functionality in service. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, operating experience, because the licensee failed to implement maintenance information through changes to station processes and procedures to address the qualification of the breakers from Vendor Technical Bulletin 06-2. Inspection Report# : [2009009](#) (*pdf*)

Significance: SL-III Aug 10, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Provide Complete Information to the NRC which Impacted a Licensing Decision.

On May 11, 2009, while reviewing an application to incorporate a medical restriction into an SRO's operating license, an NRC inspector identified that Prairie Island Nuclear Generating Plant (PINGP) had provided incomplete and inaccurate information to the NRC when a license renewal was requested for the SRO in May 2007. The issue was considered to be of very low safety significance, but was considered to have important regulatory significance because the information was provided to the NRC under a signed statement and resulted in a licensing action that would not have been taken had complete and accurate information been provided to the NRC. This was an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information."

Because the issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The finding was determined to be of low safety significance because the licensed operator had taken medications as prescribed and had not made errors during any emergency condition prior to the license being amended.

However, the regulatory significance was important because the incomplete and inaccurate information was provided under a signed statement to the NRC and impacted a licensing decision for the licensed operator. This was preliminarily determined to be an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information." No cross-cutting element for this finding was assigned. This appears to be a misunderstanding of NRC reporting requirements since they changed in January 2006 and is not reflective of current plant standards or processes in this area.

Final Enforcement Action issued 10/27/09 with NOV as follows:

During an NRC inspection conducted on May 1, 2009, through August 10, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.9 requires, in part, that information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, Orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

10 CFR 55.23 requires, in part, that to certify the medical fitness of the applicant, an authorized representative of the facility licensee shall complete and sign NRC Form 396, "Certification of Medical Examination by Facility Licensee." NRC Form 396, when signed by an authorized representative of the facility licensee, certifies that a physician conducted a medical examination of the applicant and that the guidance contained in American National Standards Institute/American Nuclear Society (ANSI/ANS) Standard 3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants" was followed in conducting the examination and making the determination of medical qualification. ANSI/ANS 3.4-1983, Section 5.3, provides, in part, that the presence of certain medical conditions, unless adequately compensated by the methods specified in Subsections 5.3.1 through 5.3.9, shall disqualify the individual.

Contrary to the above, on May 11, 2007, the facility licensee provided information to the NRC that was not complete and accurate in all material respects. Specifically, the licensee submitted an NRC Form 396 for renewal of a senior reactor operator's license which certified that the applicant met the medical requirements of ANSI/ANS 3.4 1983 with only a restriction for corrective lenses. However, in July 1998, the senior reactor operator was prescribed medication to adequately compensate for a disqualifying medical condition. The certification by the senior licensee facility representative was material to the NRC because the NRC relied upon this certification and renewed the senior reactor

operator's license pursuant to 10 CFR Part 55 without a restriction that the senior reactor operator was required to take medication as prescribed to maintain his qualification.

This is a Severity Level III violation (Supplement VII).

Inspection Report# : [2009012](#) (pdf)

Inspection Report# : [2009014](#) (pdf)

Significance: **W** Jul 09, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure Design Measures Were Appropriately Established for the Unit 2 Component Cooling Water System

An inspector identified apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified due to the licensee's failure to establish design control measures to ensure that the design basis for the Unit 2 CCW system was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the safety related function of the CCW system was maintained following initiating events (such as high energy line break, seismic or tornado events) in the turbine building. This issue has been preliminarily determined to be of low to moderate safety significance (White). This issue was entered into the licensee's corrective action program as corrective action document 1145695. Upon identifying this issue, the licensee immediately declared the Unit 2 CCW system inoperable and entered Technical Specification 3.0.3. The Technical Specification was exited following the closure of several system isolation valves approximately 2 hours later. The closure of the isolation valves prevented the Unit 2 CCW system from being vulnerable to failure following events in the turbine building.

This finding was determined to be more than minor because it impacted the design control and external events aspects of the Mitigating Systems Cornerstone. The finding also impacted the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The initiating events in the turbine building could cause the CCW piping to fail. Loss of CCW inventory affects both trains of CCW based on the piping arrangement. The loss of both trains of CCW required a phase 3 significance determination. The results of the phase 3 assessment showed a delta core damage frequency of 3.2E-6, White. The cause of this finding was related to the cross cutting element of Human Performance, Decision Making because the licensee failed to make safety significant and risk significant decisions using a systematic process to ensure that safety was maintained (H.1(a)). Since both the Unit 1 and Unit 2 cross-cutting aspects are from the same performance deficiency and are separated based on the risk determination, the aspect of H.1(a) counts as one cross-cutting aspect in this report. (Section 4OA5.1).

Final SDP letter issued September 3, 2009, as a White violation.

Inspection Report# : [2009010](#) (pdf)

Inspection Report# : [2009013](#) (pdf)

Significance: **G** Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO POSITIVELY CONTROL COMPENSATORY MEASURES

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V on April 28, 2009, for failure to have adequate procedures to control compensatory actions for degraded/non-conforming conditions. Specifically the failure to implement positive controls for the Unit 2 roll-up door as a compensatory measure for an operability determination invalidated the determination. The door was discovered less than the 18"-open requirement which supported the flooding evaluation. Corrective actions for this issue included opening the Unit 2 turbine building roll-up door to greater than 18 inches open, implementing positive configuration controls for the compensatory measures, and revising the operability determination procedure to require the implementation of positive controls.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control compensatory measures could result in rendering equipment inoperable (a more significant safety concern).

This finding was of very low safety significance because it was not a design or qualification deficiency, did not result in a loss of system safety function or the loss of a single train for greater than the Technical Specification allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event since the roll-up door was 14 inches open and would have provided some mitigation following an internal flooding event. The inspectors determined that this issue was cross cutting in the Human Performance, Resources area because the licensee failed to ensure that the operability determination procedure was adequate in regards to the control of compensatory measures.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO CONTROL MAINTENANCE ACTIVITIES TO ENSURE PLANT EQUIPMENT IS NOT UNNECESSARILY CHALLENGED

A self-revealed finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V were identified on March 19, 2009, due to the failure to have adequate procedures to control maintenance activities to ensure that plant equipment was not unnecessarily challenged. Specifically, the failure to adequately control maintenance on the 12 diesel-driven cooling water pump resulted in the unplanned automatic start of the 121 motor-driven cooling water pump during post maintenance testing activities. Corrective actions for this issue included adding instructions to the post maintenance testing procedure to ensure that it properly referenced the procedure used to realign the 121 motor-driven cooling water pump. The licensee planned to complete a review of safety related preventive maintenance procedures to ensure that proper procedure referencing and branching was utilized. Lastly, the licensee will add additional staff to assist with the procedure upgrade program and the coordination of preventive maintenance activities.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control maintenance activities could become a more significant safety concern. In addition, the inspectors determined that the identification of this issue in conjunction with several other procedure upgrade project issues is reflective of a significant programmatic deficiency in coordination of maintenance and operations procedures. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors determined that this finding was cross-cutting in the Human Performance, Resources area because the licensee did not have complete, accurate and up to date procedures regarding testing of the 12 diesel-driven cooling water pump and realignment of the 121 motor-driven cooling water pump.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

23 INVERTER RENDERED INOPERABLE DURING TRAINING ACTIVITIES

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on February 27, 2009, due to operations personnel failing to adequately implement procedures which control safety related equipment. Specifically operations personnel, unintentionally, rendered the 23 instrument inverter inoperable during the performance of on the job training activities. Corrective actions for this issue included returning the 23 instrument inverter to an operable status, providing additional training on the use of human error prevention techniques to the apprentice plant attendant, and providing additional training on the instrument inverters.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially

significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because human error prevention techniques were not used to ensure that an on the job training activity was performed safely.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

22 BATTERY CHARGER RENDERED INOPERABLE DURING MAINTENANCE ON 22 INVERTER

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on April 26, 2009, due to maintenance personnel failing to implement procedures which control safety-related equipment. Specifically maintenance personnel did not comply with work order instructions or procedures, rendering the 22 battery charger inoperable during the performance of maintenance on the 22 instrument inverter. Corrective actions for this issue included issuing a stop work order and remediating the maintenance workers on human performance tool use.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because maintenance personnel did not follow procedures during this maintenance activity.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

122 AIR COMPRESSOR RENDERED NON-FUNCTIONAL DURING CLEARANCE ORDER ACTIVITIES

A self-revealed finding of very low safety significance was identified on April 30, 2009, due to operations personnel failing to implement procedures which control plant equipment. Specifically operations personnel operated the incorrect component, rendering the 122 air compressor non-functional during the performance of independent verification activities. Corrective actions for this issue included restoring the 122 air compressor to a functional status and briefing operations personnel on the details/lessons learned from this event.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for one or more non Technical Specification trains of equipment for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the operator failed to use conservative assumptions when making the decision regarding the need to operate breaker 121E 6, 1A2 B4. No violation of NRC requirements was identified because the air compressor was non-safety related.

Inspection Report# : [2009003](#) (pdf)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to Ensure Fire door Would Consistently Close

A finding of very low safety significance was identified by the inspectors for the failure to ensure a fire door would consistently close. The licensee entered the issue into their corrective action program. This finding has a cross cutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective action to assure that the fire door would close and latch or equivalent corrective action.

The finding was determined to be more than minor because failure of the fire door to close could have allowed the propagation of a fire from one fire area to another fire area. The issue was of very low safety significance because mitigating systems for initiating events associated with a fire in the two areas would not be impacted.

Inspection Report# : [2009007](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROTECT FIRE PROTECTION EQUIPMENT FROM EFFECTS OF EXTREME COLD TEMPERATURES

The inspectors identified a finding of very low safety significance on January 13, 2009, due to the fire protection system pumps being unable to auto start, as designed, in response to a low fire header pressure condition. Corrective actions for this issue included unthawing the sensing line, verifying the screenhouse ventilation system's configuration, revising the normal screenhouse ventilation procedure to ensure that it provided guidance on shutting down the exhaust fans, and repairing several normal screenhouse ventilation system equipment deficiencies.

This finding was more than minor because if left uncorrected, the failure to protect mitigating systems equipment from the effects of extreme cold temperatures could result in the system failing to function when needed. The inspectors determined that this finding was of very low safety significance because it was assigned a low fire degradation rating as specified in the Fire Protection Significance Determination Process. This finding was determined to be cross-cutting in the Human Performance, Resources area because the licensee failed to have a complete and accurate normal screenhouse ventilation procedure to ensure that operation of the system would not result in the freezing of mitigating systems equipment during extreme cold weather conditions (H.2(c)). No violations of NRC requirements occurred because the fire pumps could have been started manually if needed and because the normal screenhouse ventilation system was nonsafety-related.

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES DURING PERFORMANCE OF OPERABILITY EVALUATIONS

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement Procedure FP-OP OL-01, "Operability Determination", to assess the capability of the 122 Control Room Chilled Water Pump to meet its mission time following the discovery of increased pump vibrations. Corrective actions for this issue included revising the operability recommendation and repairing the degraded pump.

This finding was more than minor because, if left uncorrected, failure to adequately implement the operability procedure could result in safety-related components been incorrectly declared operable rather than inoperable or operable, but non-conforming (a more significant safety concern). This finding was of very low safety significance because the finding did not represent an actual loss of safety function of a single train for longer than its Technical Specification allowed outage time. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to validate the underlying assumptions made when determining the continued operability of a safety-related component (H.1(b)).

Inspection Report# : [2009002](#) (pdf)

Significance: **G** Mar 31, 2009

Identified By: NRC

Item Type: FIN Finding

FAILURE TO FOLLOW PROCEDURE DURING D5 POST-MAINTENANCE TESTING

The inspectors identified a finding of very low safety significance on February 25, 2009, due to operations and maintenance personnel failing to identify a turbocharger coolant vent line fretting condition during a D5 emergency diesel generator post-maintenance test or during previous D5 operations. The lack of identification resulted in D5 operating with degraded conditions prior to the fretting issue being evaluated in the corrective action program. Corrective actions for this issue included performing an ultrasonic examination of the fretted area in support of an evaluation to determine whether the pipe needed to be replaced prior to declaring the diesel generator operable. The licensee also documented the untimely identification of the issue within its corrective action program.

This finding was more than minor because if left uncorrected, the failure to identify, evaluate, and correct equipment issues could result in returning safety-related equipment to service with deficiencies that impact the ability of the equipment to perform its safety function (a more significant safety concern). The inspectors determined that the finding was of very low safety significance because it was not associated with an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors considered the finding to be cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because operations and maintenance personnel failed to identify this issue in a timely manner commensurate with its safety significance (P.1(a)). No violations of NRC requirements occurred because D5 was not operable at the time this issue was identified and corrective actions were taken before it became operable.

Inspection Report# : [2009002](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance: **G** Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE TECHNICAL SUPPORT CENTER VENTILATION SYSTEM TESTING

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain the portion of the emergency plan in effect regarding the adequate maintenance of the Technical Support Center (TSC) emergency facility. Specifically, the implementation of procedure steps in Surveillance Procedure (SP) 1689, "TSC Ventilation System Operability Check," on January 25, 2009, resulted in the licensee's failure to test the TSC ventilation system in its as-found condition. As a result, the TSC ventilation system and an emergency preparedness planning standard were unknowingly degraded between July 26, 2008, and January 25, 2009. Corrective actions for this issue included ensuring that the TSC ventilation system was appropriately tested in July 2009 and revising SP 1689 to ensure that the TSC ventilation system was appropriately tested in the future.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors used Section 4.8 of the Emergency Preparedness Significance Determination Process and concluded that this finding was of very low safety significance, because the associated emergency preparedness planning standard was not lost. The finding was determined to be cross-cutting in the area of Human Performance, Resources because procedure SP 1689 was not complete and accurate.

Inspection Report# : [2009009](#) (*pdf*)

Occupational Radiation Safety

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

VALVE TECHNICIAN BECAME INTERNALLY AND EXTERNALLY CONTAMINATED WHEN HE BREACHED THE RH-2-1 VALVE CONTRARY TO THE REQUIREMENTS OF THE RWP.

A self-revealed finding of very low safety-significance and an NCV of Technical Specification 5.4.1 was identified for the failure to implement written procedures in the area of radiation protection. Specifically, the licensee failed to meet radiation work permit requirements during a valve breach. As a result, a valve technician became internally and externally contaminated. Corrective actions for this issue included performance management of the personnel involved.

This finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone. In addition, the finding impacted the cornerstone objective of protecting worker health and safety from exposure to radiation. The inspectors determined that the finding was of very low safety significance, because the finding did not involve As-Low-As-Is-Reasonably Achievable planning or work controls, there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because personnel failed to follow procedures during the valve breach (H.4(b)).

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Jan 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Formal Job Planning to Evaluate the Radiological Hazards

An NRC-identified finding of very low safety significance with an associated Non-Cited Violation (NCV) of Technical Specification 5.4.1 was identified in the area of occupational radiation safety associated with the licensee's failure to perform adequate job planning to evaluate the radiological hazards, as required by station procedures. Specifically, the licensee failed to properly assess the radiological hazards to workers associated with the decontamination, demobilization and packaging of fuel sipping equipment on the refuel floor. This issue has been entered into the licensee's corrective action program and implemented corrective actions that include changes to procedures to include a holistic risk-based review of radiologically significant work.

The finding is more than minor because, given the radiological uncertainty of working with fuel handling equipment, if left uncorrected the finding could become a more significant safety concern. The finding was determined to be of very low safety significance because it did not involve unintended collective dose (ALARA planning); there was no overexposure, nor potential for overexposure; and the licensee's ability to assess dose was not compromised. Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)).

Inspection Report# : [2008009](#) (*pdf*)

Public Radiation Safety

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

RADIOACTIVE WASTE BUILDING VENTILATION SYSTEM AND THE ASSOCIATED RADIATION DETECTOR BEING OUT OF SERVICE FOR EXTENDED PERIODS OF TIME WITHOUT INSTITUTING COMPENSATORY ACTIONS

An inspector-identified finding of very low safety-significance and an NCV of 10 CFR Part 20.1501 was identified for the failure to evaluate the potential radiological environmental dose impact associated with the extended non functionality of the radioactive waste building ventilation system and its radiation detector. As a result, compensatory measures were not established to compensate for the non functional equipment. Corrective actions for this issue included instituting compensatory radiological sampling and increasing the priority of the radwaste building ventilation system repairs.

This finding was more than minor because it was associated with the program and process attribute of the Public Radiation Safety cornerstone. In addition, this finding impacted the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The inspectors determined that the finding was of very low safety significance because it did not involve radioactive material control, there was not a substantial failure to implement the radiological effluent program, and public dose was less than Appendix I criteria and 10 CFR 20.1301. The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action area, because although this long standing equipment issue had been documented in the licensee's corrective action program, the issue had not been fully evaluated nor had actions been taken to address the equipment deficiency in a timely manner (P.1(c)).

Inspection Report# : [2009005](#) (*pdf*)

Significance: **W** Jan 21, 2009

Identified By: NRC

Item Type: VIO Violation

Radioactive Material Shipment Package radiation Levels Exceeded

A self-revealing finding with an apparent violation of regulatory requirements was identified involving a failure of the licensee to properly radiologically characterize, prepare, and ship a package containing radioactive material in a manner that assured, under conditions normally incident to transport, conformance with Department of Transportation (DOT) radiation level limitations specified by 49 CFR 173.441(a), (i.e., 200 millirem per hour (mrem/h)) on any external surface of the package as required by 10 CFR 71.5 [and 49 CFR 173.441(a)]. Additionally, the licensee did not provide nor ensure that the individuals involved in preparing this shipment were trained and qualified for the task as specified by 49 CFR 172.704, "Training Requirements." The finding involved an October 29, 2008, radioactive material shipment, via an exclusive-use open transport vehicle that was determined to have radiation levels of 1630 mrem/h on the external surface of a package upon receipt at the shipping destination. As immediate corrective actions, the licensee suspended all radioactive shipment activities. The licensee entered this performance deficiency in their corrective action program; initiated a root cause evaluation; and initiated corrective measures, including various process improvements to prevent recurrence.

This finding is more than minor since it was associated with the Public Radiation Safety Cornerstone program and process attribute and affected the cornerstone objective to ensure adequate protection of the public from exposure to radioactive materials given that package radiation levels were elevated. Preliminarily, the significance of this finding is considered as having a substantial safety significance (Yellow), since the radiation level was greater than five times the limit (1000 mrem/h) but less than ten times the limit (2000 mrem/h) specified by the DOT regulatory requirement. Although the surface of the package with elevated radiation levels would not be routinely accessible to a member of the public during transport, that aspect was fortuitous and not the result of design nor package preparation by the licensee. The condition had the potential to adversely affect personnel who would normally receive the package or respond to an incident involving the package, with a reasonable expectation that the package conformed to DOT radiation limitations.

Additionally, the cause of this finding had a cross-cutting aspect in the area of Human Performance. Specifically, the licensee failed to appropriately plan the work activity by incorporating risk insights and job site conditions, including conditions which may impact radiological safety (H.3 (a)). This finding is documented within the licensee's corrective action system as RCE 1157726.

Final determination letter issued May 6, 2009.

95001 Completed on 12/4/2009 - closed item.

Inspection Report# : [2008009](#) (*pdf*)

Inspection Report# : [2009008](#) (*pdf*)

Inspection Report# : [2009015](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 13, 2009

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

On the basis of the information reviewed, the team concluded that the corrective action (CA) program at Prairie Island was functional, but implementation was lacking in rigor resulting in inconsistent and undesirable results. In general, the licensee had a low threshold for identifying problems (issue reports called CAPs) and entering them in the CA program; however, some significant issues went unrecognized and therefore CAPs were not issued for these. Most items entered into the CA program were screened and prioritized in a timely manner using established criteria; however, inspectors observed inconsistency and lack of rigor in the screening process. Most issues, including operating experience, were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, the inspectors identified significant examples of issues with evaluation and corrective action shortcomings that resulted in inspection findings. The backlog of corrective actions was large and growing. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies, but the station was not taking full advantage of the processes and results. On the basis of interviews conducted during the inspection, and a review of the employee concerns program, workers at the site were willing to enter safety concerns into the CA program.

Inspectors continued to have concerns with the performance of the corrective action program. The last biennial problem identification and resolution inspection in 2007 was critical of program implementation and weaknesses were recognized by the licensee. An improvement effort was initiated. At the time of this inspection, inspectors concluded that performance had declined and another improvement plan was in progress. The current improvement program was not yet fully implemented and effective.

Inspection Report# : [2009009](#) (*pdf*)

Last modified : March 01, 2010

Prairie Island 2

1Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR HEATER DRAIN PUMP SWAPS

The inspectors identified a finding of very low significance and non-cited violation (NCV) of Technical Specification 5.4.1.a for the licensee failing to obtain a temporary or permanent procedure change, as required by their Procedure Use and Adherence procedure, prior to implementing a procedure when it was determined that they could not complete a required swap of two heater drain pumps using the applicable section of the appropriate operating procedure. Once identified, the licensee took actions to correct the issue and entered the issue into their corrective action program.

The inspectors determined the finding to be more than minor because if left uncorrected, this finding had the potential to lead to a more significant safety concern. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Phase 1 Worksheet for the Initiating Events Cornerstone. Since the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, the inspectors concluded that the finding was of very low safety significance. The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having work practices components, and involving aspects associated with personnel following procedures.

Inspection Report# : [2009009](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ENSURE TURBINE VALVE TESTING PROCEDURE WAS ADEQUATE

A self-revealed finding of very low safety significance was identified on May 9, 2009, due to operations personnel failing to ensure that procedures used to test the Unit 2 turbine stop valves provided adequate guidance regarding the valve position limiter setting. The failure to ensure that adequate guidance was provided prior to performing the turbine stop valve test resulted in a reactor coolant system transient and a seven percent reduction in reactor power. Corrective actions for this issue included revising the test procedure to ensure that guidance regarding the valve position limiter setting was adequate, providing additional training on the digital electro hydraulic control system to operations personnel, and re enforcing the human performance fundamentals.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone. In addition, the finding affected the cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. The inspectors concluded that this finding was of very low safety significance because it did not result in exceeding the Technical Specifications limit on reactor coolant system leakage, did not result in a total loss of safety function of a mitigating system, did not contribute to both the likelihood of a reactor trip and that mitigating systems equipment would not be available, and it did not increase the likelihood of a fire or flood. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because operations personnel failed to use conservative assumptions in deciding how the valve position limiter operated. In addition, operations personnel failed to demonstrate that their proposed actions regarding the valve position limiter setting was safe (by reviewing design basis or training documents and/or requesting assistance from additional personnel) prior to performing the test. No violation of NRC requirements was identified because the turbine stop valves are non-safety related.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Combustible Materials Present Within Safety Related Fire Area

A finding of very low safety significance and associated NCV of License Condition 2.C.(4) was identified by the inspectors for the failure to minimize the use of combustible materials in a safety-related area. Specifically, the inspectors identified wooden tables in two diesel generator control rooms. The licensee entered the issue into their corrective action program and planned to replace the wood tables with metal tables.

The finding was determined to be more than minor because the inspectors' finding was similar to IMC 0612, Appendix E, Example 4.k. The combustible materials created a credible fire scenario that could affect equipment important to safety. The issue was of very low safety significance because the identified materials had a low likelihood of causing a fire from existing sources of heat or electrical energy.

Inspection Report# : [2009007](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE COOLING WATER AND FUEL OIL SYSTEMS WERE PROTECTED FROM FLOODING IMPACTS

The inspectors identified finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement design control measures to ensure that the functions of the diesel-driven cooling water pumps (DDCLPs) and the fuel oil system were maintained following an internal flood in the plant screenhouse. Specifically, the licensee failed to address the need for additional fuel oil volume following the loss of the DDCLP fuel oil transfer pump motor starters due to the flood waters. Immediate corrective actions included increasing the fuel oil volume in the fuel oil storage tanks. The licensee was also exploring the need to relocate the motor starters to an alternate location that would not be impacted by the flood waters.

The inspectors determined this finding was more than minor because the Mitigating Systems cornerstone design control attribute and objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. The inspectors determined that this finding was of very low safety significance because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This issue was not assigned a cross-cutting aspect since the cause dates back greater than 3 years and was not reflective of current performance.

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY IMPLEMENT OPERABILITY PROCEDURE

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V for the failure to adequately implement Procedure FP OP OL 01, "Operability/Functionality Determination." The failure to adequately implement this procedure resulted in the completion of determinations which failed to fully assess the safety function of the equipment, failed to fully evaluate information contained in the Updated Safety Analysis Report, or included information which questioned the component's ability to meet Technical Specification requirements. Corrective actions for this issue included initiating an adverse trend corrective action document, revising the impacted operability determinations, performing an apparent cause evaluation on the

programmatic weaknesses, and implementing additional corrective actions as necessary.

The inspectors determined that this issue was more than minor because the implementation weaknesses resulted in completing operability determinations which cast reasonable doubt on the continued operability of the equipment or demonstrated significant programmatic concerns that could lead to worse errors if not corrected. The inspectors determined that this issue was of very low safety significance because each of the conditions described in the determinations did not result in a loss of safety function of a single train for greater than the allowed outage time. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because although the licensee had formally defined and communicated the authority and roles for decisions affecting nuclear safety, the implementation of these roles and authorities were not as designed. In addition, the interdisciplinary reviews of these safety significant decisions were not always effective (H.1(a)).

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Mar 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Determine the Minimum Cooling Water System Flow Required After a Design Basis Earthquake

A finding of very low safety-significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to determine the minimum cooling water system flow required after a design basis earthquake (DBE) to safely shutdown both reactors and to correctly translate these results into procedures. Specifically, the licensee failed to determine the cooling water flow rate necessary to shutdown both reactors after a DBE and ensure that this flow rate remained within the capacity of the emergency intake line. As a result, design bases were not correctly translated into procedures. The licensee confirmed through a preliminary calculation that the system remained operable.

The finding was determined to be more than minor because the failure to determine the cooling water flow necessary to shutdown both reactors after a DBE could have provided incorrect guidance in the procedure and to the operators. This finding is of very low safety-significance (Green) because the design deficiency was confirmed not to result in loss of operability or functionality. This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with its safety-significance and complexity [p1.d].

Inspection Report# : [2010008](#) (*pdf*)

Significance: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION FOR LER 05000306/2008-001-00

A NRC-identified issue and a NCV of 10 CFR 50.9 was identified when the inspectors discovered that Licensee Event Report (LER) 05000306/2008-001-00 was not complete and accurate in all material aspects. Specifically, the LER omitted information regarding when and how the licensee became aware that the Unit 2 component cooling water system was susceptible to failure following a postulated high energy line break in the turbine building. The omitted information was considered to be material to the NRC because it potentially affected the NRC's determination as to whether this issue would be characterized as an old design issue per Inspection Manual Chapter 0305. Subsequent to discovery of the deficiency, the licensee submitted Revision 1 to LER 05000306/2008-001 00, on January 19, 2009, which documented the originally omitted information.

This issue was determined to be more than minor because it affected the NRC's ability to perform its regulatory function. As a result, this finding was evaluated with the traditional enforcement process. Using the information provided in IMC 0612, Appendix B, "Issue Screening," this issue was determined to be a Severity Level IV NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This finding was determined to be cross cutting in the Human Performance, Work Control area, because the licensee failed to properly plan and coordinate work activities to address the impact of work on different job activities and the need for groups to communicate, coordinate, and cooperate with others during work activities (H.3(b)).

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE RESULTS IN FAILURE TO IDENTIFY ADVERSE TREND REGARDING COOLING WATER PUMP RIGHT ANGLE DRIVE FOULING

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50 Appendix B, Criterion V, due to the licensee's failure to accomplish an activity affecting quality in accordance with procedures. Specifically, licensee personnel failed to identify repeated blocking of the diesel-driven cooling water pumps right angle drive gear oil coolers with debris as an adverse trend even though blockages had been identified four times between July 2005 and August 2009. As a result, the adverse trend was not characterized as a significant condition adverse to quality as required by Procedure FP PA ARP 01, "Corrective Action Program Action Request Process." The failure to identify this issue as an adverse trend and a significant condition adverse to quality resulted in the untimely implementation of corrective actions to prevent recurrence and contributed to the August 27, 2009, inoperability of the 12 diesel-driven cooling water pumps. Corrective actions for this issue included the continued installation of ultrasonic flow meters to monitor flow to the right angle drive gear oil coolers and the implementation of a modification to strain the cooling water flow to the right angle drive gear oil coolers prior to performing the next zebra mussel treatment.

The finding was more than minor because the failure to properly implement the corrective action procedure impacted the equipment performance attribute of the Mitigating Systems cornerstone and the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because it did not involve a loss of safety function of a single train for greater than technical specification allowed outage time, did not involve a loss of system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to appropriately use systematic processes (i.e., the corrective action, engineering change, and the preventive maintenance processes) when making safety significant decisions regarding the repeated blockage of the right angle drive gear oil coolers (H.1(a)).

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO QUALIFY SAFETY-RELATED MOLDED CASE CIRCUIT BREAKERS

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to promptly correct a condition adverse to quality regarding the expired qualification of safety-related molded case circuit breakers. Specifically, the licensee failed to evaluate extending the service life of safety-related molded case circuit breakers beyond the 20 year life expectancy, a condition adverse to quality. The licensee entered this issue into its corrective action program.

The finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated December 4, 2008, because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, an unqualified safety-related molded case circuit breaker could lead to higher trip times and potential unavailability of safety-related components associated with the bus when a circuit fault is present. The finding screened as of very low safety significance because the finding was a qualification deficiency confirmed not to have resulted in loss of operability or functionality in service. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, operating experience, because the licensee failed to implement maintenance information through changes to station processes and procedures to address the qualification of the breakers from Vendor Technical Bulletin 06-2.

Significance: SL-III Aug 10, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Provide Complete Information to the NRC which Impacted a Licensing Decision.

On May 11, 2009, while reviewing an application to incorporate a medical restriction into an SRO's operating license, an NRC inspector identified that Prairie Island Nuclear Generating Plant (PINGP) had provided incomplete and inaccurate information to the NRC when a license renewal was requested for the SRO in May 2007. The issue was considered to be of very low safety significance, but was considered to have important regulatory significance because the information was provided to the NRC under a signed statement and resulted in a licensing action that would not have been taken had complete and accurate information been provided to the NRC. This was an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information."

Because the issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The finding was determined to be of low safety significance because the licensed operator had taken medications as prescribed and had not made errors during any emergency condition prior to the license being amended.

However, the regulatory significance was important because the incomplete and inaccurate information was provided under a signed statement to the NRC and impacted a licensing decision for the licensed operator. This was preliminarily determined to be an apparent violation of 10 CFR 50.9, "Completeness and Accuracy of Information." No cross-cutting element for this finding was assigned. This appears to be a misunderstanding of NRC reporting requirements since they changed in January 2006 and is not reflective of current plant standards or processes in this area.

Final Enforcement Action issued 10/27/09 with NOV as follows:

During an NRC inspection conducted on May 1, 2009, through August 10, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.9 requires, in part, that information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, Orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

10 CFR 55.23 requires, in part, that to certify the medical fitness of the applicant, an authorized representative of the facility licensee shall complete and sign NRC Form 396, "Certification of Medical Examination by Facility Licensee." NRC Form 396, when signed by an authorized representative of the facility licensee, certifies that a physician conducted a medical examination of the applicant and that the guidance contained in American National Standards Institute/American Nuclear Society (ANSI/ANS) Standard 3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants" was followed in conducting the examination and making the determination of medical qualification. ANSI/ANS 3.4-1983, Section 5.3, provides, in part, that the presence of certain medical conditions, unless adequately compensated by the methods specified in Subsections 5.3.1 through 5.3.9, shall disqualify the individual.

Contrary to the above, on May 11, 2007, the facility licensee provided information to the NRC that was not complete and accurate in all material respects. Specifically, the licensee submitted an NRC Form 396 for renewal of a senior reactor operator's license which certified that the applicant met the medical requirements of ANSI/ANS 3.4 1983 with only a restriction for corrective lenses. However, in July 1998, the senior reactor operator was prescribed medication to adequately compensate for a disqualifying medical condition. The certification by the senior licensee facility representative was material to the NRC because the NRC relied upon this certification and renewed the senior reactor operator's license pursuant to 10 CFR Part 55 without a restriction that the senior reactor operator was required to take medication as prescribed to maintain his qualification.

This is a Severity Level III violation (Supplement VII).

Inspection Report# : [2009012](#) (pdf)

Inspection Report# : [2009014](#) (pdf)

Inspection Report# : [2010002](#) (pdf)

Significance: **W** Jul 09, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure Design Measures Were Appropriately Established for the Unit 2 Component Cooling Water System

An inspector identified apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified due to the licensee's failure to establish design control measures to ensure that the design basis for the Unit 2 CCW system was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the safety related function of the CCW system was maintained following initiating events (such as high energy line break, seismic or tornado events) in the turbine building. This issue has been preliminarily determined to be of low to moderate safety significance (White). This issue was entered into the licensee's corrective action program as corrective action document 1145695. Upon identifying this issue, the licensee immediately declared the Unit 2 CCW system inoperable and entered Technical Specification 3.0.3. The Technical Specification was exited following the closure of several system isolation valves approximately 2 hours later. The closure of the isolation valves prevented the Unit 2 CCW system from being vulnerable to failure following events in the turbine building.

This finding was determined to be more than minor because it impacted the design control and external events aspects of the Mitigating Systems Cornerstone. The finding also impacted the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The initiating events in the turbine building could cause the CCW piping to fail. Loss of CCW inventory affects both trains of CCW based on the piping arrangement. The loss of both trains of CCW required a phase 3 significance determination. The results of the phase 3 assessment showed a delta core damage frequency of $3.2E-6$, White. The cause of this finding was related to the cross cutting element of Human Performance, Decision Making because the licensee failed to make safety significant and risk significant decisions using a systematic process to ensure that safety was maintained (H.1(a)). Since both the Unit 1 and Unit 2 cross-cutting aspects are from the same performance deficiency and are separated based on the risk determination, the aspect of H.1(a) counts as one cross-cutting aspect in this report. (Section 4OA5.1).

Final SDP letter issued September 3, 2009, as a White violation.

Inspection Report# : [2009010](#) (*pdf*)

Inspection Report# : [2009013](#) (*pdf*)

Significance: **G** Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO POSITIVELY CONTROL COMPENSATORY MEASURES

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V on April 28, 2009, for failure to have adequate procedures to control compensatory actions for degraded/non-conforming conditions. Specifically the failure to implement positive controls for the Unit 2 roll-up door as a compensatory measure for an operability determination invalidated the determination. The door was discovered less than the 18"-open requirement which supported the flooding evaluation. Corrective actions for this issue included opening the Unit 2 turbine building roll-up door to greater than 18 inches open, implementing positive configuration controls for the compensatory measures, and revising the operability determination procedure to require the implementation of positive controls.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control compensatory measures could result in rendering equipment inoperable (a more significant safety concern). This finding was of very low safety significance because it was not a design or qualification deficiency, did not result in a loss of system safety function or the loss of a single train for greater than the Technical Specification allowed outage time, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event since the roll-up door was 14 inches open and would have provided some mitigation following an internal flooding event. The inspectors determined that this issue was cross cutting in the Human Performance, Resources area because the licensee failed to ensure that the operability determination procedure was adequate in regards to the control of compensatory measures.

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO CONTROL MAINTENANCE ACTIVITIES TO ENSURE PLANT EQUIPMENT IS NOT UNNECESSARILY CHALLENGED

A self-revealed finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V were identified on March 19, 2009, due to the failure to have adequate procedures to control maintenance activities to ensure that plant equipment was not unnecessarily challenged. Specifically, the failure to adequately control maintenance on the 12 diesel-driven cooling water pump resulted in the unplanned automatic start of the 121 motor-driven cooling water pump during post maintenance testing activities. Corrective actions for this issue included adding instructions to the post maintenance testing procedure to ensure that it properly referenced the procedure used to realign the 121 motor-driven cooling water pump. The licensee planned to complete a review of safety related preventive maintenance procedures to ensure that proper procedure referencing and branching was utilized. Lastly, the licensee will add additional staff to assist with the procedure upgrade program and the coordination of preventive maintenance activities.

The inspectors determined that this finding was more than minor because if left uncorrected the failure to properly control maintenance activities could become a more significant safety concern. In addition, the inspectors determined that the identification of this issue in conjunction with several other procedure upgrade project issues is reflective of a significant programmatic deficiency in coordination of maintenance and operations procedures. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors determined that this finding was cross-cutting in the Human Performance, Resources area because the licensee did not have complete, accurate and up to date procedures regarding testing of the 12 diesel-driven cooling water pump and realignment of the 121 motor-driven cooling water pump.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

23 INVERTER RENDERED INOPERABLE DURING TRAINING ACTIVITIES

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on February 27, 2009, due to operations personnel failing to adequately implement procedures which control safety related equipment. Specifically operations personnel, unintentionally, rendered the 23 instrument inverter inoperable during the performance of on the job training activities. Corrective actions for this issue included returning the 23 instrument inverter to an operable status, providing additional training on the use of human error prevention techniques to the apprentice plant attendant, and providing additional training on the instrument inverters.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because human error prevention techniques were not used to ensure that an on the job training activity was performed safely.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

22 BATTERY CHARGER RENDERED INOPERABLE DURING MAINTENANCE ON 22 INVERTER

A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 were identified on April 26, 2009, due to maintenance personnel failing to implement procedures which control safety-related equipment. Specifically maintenance personnel did not comply with work order instructions or procedures, rendering the 22 battery charger inoperable during the performance of maintenance on the 22 instrument inverter. Corrective actions for this issue included issuing a stop work order and remediating the maintenance workers on human performance tool use.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function of one train of equipment for greater than the Technical Specification allowed outage time, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Practices area because maintenance personnel did not follow procedures during this maintenance activity.

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

122 AIR COMPRESSOR RENDERED NON-FUNCTIONAL DURING CLEARANCE ORDER ACTIVITIES

A self-revealed finding of very low safety significance was identified on April 30, 2009, due to operations personnel failing to implement procedures which control plant equipment. Specifically operations personnel operated the incorrect component, rendering the 122 air compressor non-functional during the performance of independent verification activities. Corrective actions for this issue included restoring the 122 air compressor to a functional status and briefing operations personnel on the details/lessons learned from this event.

The inspectors determined that this finding was 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. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function, was not an actual loss of safety function for one or more non Technical Specification trains of equipment for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the operator failed to use conservative assumptions when making the decision regarding the need to operate breaker 121E 6, 1A2 B4. No violation of NRC requirements was identified because the air compressor was non-safety related.

Inspection Report# : [2009003](#) (pdf)

Significance:  Apr 24, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to Ensure Fire door Would Consistently Close

A finding of very low safety significance was identified by the inspectors for the failure to ensure a fire door would consistently close. The licensee entered the issue into their corrective action program. This finding has a cross cutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective action to assure that the fire door would close and latch or equivalent corrective action.

The finding was determined to be more than minor because failure of the fire door to close could have allowed the

propagation of a fire from one fire area to another fire area. The issue was of very low safety significance because mitigating systems for initiating events associated with a fire in the two areas would not be impacted.

Inspection Report# : [2009007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance: TBD Mar 04, 2010

Identified By: Licensee

Item Type: AV Apparent Violation

Failure to Maintain a Standard Emergency Action Level Scheme

A licensee identified finding and associated Apparent Violation (AV) of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4) was identified for the failure to follow and maintain in effect emergency plans which use a standard emergency classification and action level scheme. Specifically, the licensee's emergency plan Alert emergency action levels (EALs) RA1.1 and RA1.2 specified instrument threshold values that were beyond the indicated ranges of the effluent radiation monitors.

The performance deficiency was determined to be more than minor because the deficiency, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, in the event of a radiological emergency, the deficiency could lead to the failure to declare two Alert conditions in a timely manner. The finding was evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Appendix B. Using the "Failure to Comply" flowchart, the performance deficiency screened as a risk significant planning standard problem. The inspector determined the problem was a degraded function, rather than function failure, because even though the two Alerts (RA1.1 and RA1.2) would not be able to be declared due to the EAL threshold values being beyond the range of the associated instruments, an Alert could be declared, although in a delayed manner, using RA1.3 which is based on a sample results. The degraded risk significant planning standard function resulted in a preliminary White finding.

Preliminary SDP/Choice Letter Issued - 04/08/2010.

Inspection Report# : [2010503](#) (*pdf*)

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE TECHNICAL SUPPORT CENTER VENTILATION SYSTEM TESTING

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain the portion of the emergency plan in effect regarding the adequate maintenance of the Technical Support Center (TSC) emergency facility. Specifically, the implementation of procedure steps in Surveillance Procedure (SP) 1689, "TSC Ventilation System Operability Check," on January 25, 2009, resulted in the licensee's failure to test the TSC ventilation system in its as-found condition. As a result, the TSC ventilation system and an emergency preparedness planning standard were unknowingly degraded between July 26, 2008, and January 25, 2009. Corrective actions for this issue included ensuring that the TSC ventilation system was appropriately tested in July 2009 and revising SP 1689 to ensure that the TSC ventilation system was appropriately tested in the future.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors used Section 4.8 of the Emergency Preparedness Significance Determination Process and concluded that this finding was of very low safety significance, because the associated emergency preparedness

planning standard was not lost. The finding was determined to be cross-cutting in the area of Human Performance, Resources because procedure SP 1689 was not complete and accurate.

Inspection Report# : [2009009](#) (pdf)

Occupational Radiation Safety

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

VALVE TECHNICIAN BECAME INTERNALLY AND EXTERNALLY CONTAMINATED WHEN HE BREACHED THE RH-2-1 VALVE CONTRARY TO THE REQUIREMENTS OF THE RWP.

A self-revealed finding of very low safety-significance and an NCV of Technical Specification 5.4.1 was identified for the failure to implement written procedures in the area of radiation protection. Specifically, the licensee failed to meet radiation work permit requirements during a valve breach. As a result, a valve technician became internally and externally contaminated. Corrective actions for this issue included performance management of the personnel involved.

This finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone. In addition, the finding impacted the cornerstone objective of protecting worker health and safety from exposure to radiation. The inspectors determined that the finding was of very low safety significance, because the finding did not involve As-Low-As-Is-Reasonably Achievable planning or work controls, there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because personnel failed to follow procedures during the valve breach (H.4(b)).

Inspection Report# : [2009005](#) (pdf)

Public Radiation Safety

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

RADIOACTIVE WASTE BUILDING VENTILATION SYSTEM AND THE ASSOCIATED RADIATION DETECTOR BEING OUT OF SERVICE FOR EXTENDED PERIODS OF TIME WITHOUT INSTITUTING COMPENSATORY ACTIONS

An inspector-identified finding of very low safety-significance and an NCV of 10 CFR Part 20.1501 was identified for the failure to evaluate the potential radiological environmental dose impact associated with the extended non functionality of the radioactive waste building ventilation system and its radiation detector. As a result, compensatory measures were not established to compensate for the non functional equipment. Corrective actions for this issue included instituting compensatory radiological sampling and increasing the priority of the radwaste building ventilation system repairs.

This finding was more than minor because it was associated with the program and process attribute of the Public Radiation Safety cornerstone. In addition, this finding impacted the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The inspectors determined that the finding was of very low safety significance because it did not involve radioactive material control, there was not a substantial failure to implement the radiological effluent program, and public dose was less than Appendix I criteria and 10 CFR 20.1301. The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action area, because although this long standing equipment issue had been documented in the licensee's corrective

action program, the issue had not been fully evaluated nor had actions been taken to address the equipment deficiency in a timely manner (P.1(c)).

Inspection Report# : [2009005](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 13, 2009

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

On the basis of the information reviewed, the team concluded that the corrective action (CA) program at Prairie Island was functional, but implementation was lacking in rigor resulting in inconsistent and undesirable results. In general, the licensee had a low threshold for identifying problems (issue reports called CAPs) and entering them in the CA program; however, some significant issues went unrecognized and therefore CAPs were not issued for these. Most items entered into the CA program were screened and prioritized in a timely manner using established criteria; however, inspectors observed inconsistency and lack of rigor in the screening process. Most issues, including operating experience, were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, the inspectors identified significant examples of issues with evaluation and corrective action shortcomings that resulted in inspection findings. The backlog of corrective actions was large and growing. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies, but the station was not taking full advantage of the processes and results. On the basis of interviews conducted during the inspection, and a review of the employee concerns program, workers at the site were willing to enter safety concerns into the CA program.

Inspectors continued to have concerns with the performance of the corrective action program. The last biennial problem identification and resolution inspection in 2007 was critical of program implementation and weaknesses were recognized by the licensee. An improvement effort was initiated. At the time of this inspection, inspectors concluded that performance had declined and another improvement plan was in progress. The current improvement program was not yet fully implemented and effective.

Inspection Report# : [2009009](#) (*pdf*)

Last modified : May 26, 2010

Prairie Island 2

2Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ADDRESS DESIGN VULNERABILITY RESULTS IN REACTOR TRIP

A self revealed finding of very low safety significance was identified following an automatic reactor trip on April 16, 2010. Specifically, the licensee failed to appropriately establish and implement actions to correct the causes of a turbine trip/reactor trip in 2001 and a turbine trip in 2003 even though the actions were required by the corrective action procedure in use at the time of the event. The failure to appropriately establish and implement actions to correct the causes of the previous events resulted in creating a large difference in Unit 2 condenser pressures while operating at lower power levels and a subsequent turbine trip/reactor trip. Corrective actions for this issue included correcting system deficiencies which led to the large difference in condenser pressures and improving procedural guidance regarding the sealing steam system.

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 Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance because it did not contribute to a reactor trip with mitigating equipment not available. No cross cutting aspect was assigned to this finding because the decisions made in regard to the 2001 and 2003 actions were made more than 2 years ago. No violation of NRC requirements was identified because the system deficiencies that contributed to the turbine trip/reactor trip were associated with non safety related systems. (Section 40A3.7)

Inspection Report# : [2010003](#) (*pdf*)

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR HEATER DRAIN PUMP SWAPS

The inspectors identified a finding of very low significance and non-cited violation (NCV) of Technical Specification 5.4.1.a for the licensee failing to obtain a temporary or permanent procedure change, as required by their Procedure Use and Adherence procedure, prior to implementing a procedure when it was determined that they could not complete a required swap of two heater drain pumps using the applicable section of the appropriate operating procedure. Once identified, the licensee took actions to correct the issue and entered the issue into their corrective action program.

The inspectors determined the finding to be more than minor because if left uncorrected, this finding had the potential to lead to a more significant safety concern. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, Attachment 1, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Phase 1 Worksheet for the Initiating Events Cornerstone. Since the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, the inspectors concluded that the finding was of very low safety significance. The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having work practices components, and involving aspects associated with personnel following procedures.

Inspection Report# : [2009009](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

LACK OF OPERATOR PROCEDURE USE DURING SYSTEM ALIGNMENT

A self revealed finding of very low safety significance and a non-cited violation of Technical Specification 5.4.1 was identified on April 9, 2010, due to the licensee's failure to implement Step 5.1.1 of Procedure FP G DOC 03, "Procedure Use and Adherence." Step 5.1.1 of FP G DOC 03 required that personnel perform activities affecting quality using working copies of continuous or reference use procedures. However, operations personnel failed to use a working copy of reference use Procedure C37.13, "Containment and Auxiliary Building Cooling System," when performing valve alignments to support the performance of a surveillance test. The failure to use a working copy of C37.13 resulted in the operator performing a valve alignment incorrectly and a loss of one-half of the Unit 2 containment cooling system. Corrective actions for this issue included restoring the containment cooling system, briefing licensee personnel on the event, and reinforcing the use of the human performance tools.

The inspectors determined that this finding was more than minor because it was associated with the human performance attribute of the Mitigating System 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 determined that this finding was of very low safety significance because it did not represent a loss of a system safety function, the fan coil units were inoperable for less than the Technical Specification allowed outage time, and the finding was not potentially risk significant due to external events. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel did not ensure human error prevention techniques were used such that work activities were performed safely (H.4(a)). (Section 40A3.8)

Inspection Report# : [2010003](#) (*pdf*)

Significance: TBD May 03, 2010

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Ensure Design Measures Were Appropriately Established for the Emergency Diesel Generator, Auxiliary Feedwater, and Safety Related Battery Systems (Section 40A5.1)

An apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors due to the licensee's failure to establish measures to ensure that engineered safety features such as the emergency diesel generators, the auxiliary feedwater system, and the safety related batteries were not adversely affected by events that cause turbine building flooding. As a result, flooding from these events would cause a loss of safety function for these systems. This issue was entered into the licensee's corrective action program (CAP) as CAP 1178236. Upon identifying this issue, the licensee implemented compensatory measures to ensure that the systems listed above were not adversely impacted following a turbine building internal flood.

This finding was determined to be more than minor because it impacted the design control and external events attributes of the Mitigating Systems cornerstone. The finding also impacted the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 3 evaluation was required because the finding represented a loss of safety function of multiple mitigating systems. A Phase 2 SDP evaluation was not performed because the Phase 2 SDP worksheets do not apply to internal flooding events. The results of the Phase 3 SDP assessment showed that this finding was potentially Greater than Green. No cross cutting aspect was assigned to this finding because licensee decisions made in regard to evaluating the susceptibility of mitigating systems equipment to turbine building internal flooding events were made more than 3 years ago and therefore, not reflective of current plant performance. (Section 40A5.1)

Inspection Report# : [2010010](#) (*pdf*)

Inspection Report# : [2010011](#) (*pdf*)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE COOLING WATER AND FUEL OIL SYSTEMS WERE PROTECTED FROM

FLOODING IMPACTS

The inspectors identified finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement design control measures to ensure that the functions of the diesel-driven cooling water pumps (DDCLPs) and the fuel oil system were maintained following an internal flood in the plant screenhouse. Specifically, the licensee failed to address the need for additional fuel oil volume following the loss of the DDCLP fuel oil transfer pump motor starters due to the flood waters. Immediate corrective actions included increasing the fuel oil volume in the fuel oil storage tanks. The licensee was also exploring the need to relocate the motor starters to an alternate location that would not be impacted by the flood waters.

The inspectors determined this finding was more than minor because the Mitigating Systems cornerstone design control attribute and objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. The inspectors determined that this finding was of very low safety significance because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This issue was not assigned a cross-cutting aspect since the cause dates back greater than 3 years and was not reflective of current performance.

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY IMPLEMENT OPERABILITY PROCEDURE

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V for the failure to adequately implement Procedure FP OP OL 01, "Operability/Functionality Determination." The failure to adequately implement this procedure resulted in the completion of determinations which failed to fully assess the safety function of the equipment, failed to fully evaluate information contained in the Updated Safety Analysis Report, or included information which questioned the component's ability to meet Technical Specification requirements. Corrective actions for this issue included initiating an adverse trend corrective action document, revising the impacted operability determinations, performing an apparent cause evaluation on the programmatic weaknesses, and implementing additional corrective actions as necessary.

The inspectors determined that this issue was more than minor because the implementation weaknesses resulted in completing operability determinations which cast reasonable doubt on the continued operability of the equipment or demonstrated significant programmatic concerns that could lead to worse errors if not corrected. The inspectors determined that this issue was of very low safety significance because each of the conditions described in the determinations did not result in a loss of safety function of a single train for greater than the allowed outage time. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because although the licensee had formally defined and communicated the authority and roles for decisions affecting nuclear safety, the implementation of these roles and authorities were not as designed. In addition, the interdisciplinary reviews of these safety significant decisions were not always effective (H.1(a)).

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Mar 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Determine the Minimum Cooling Water System Flow Required After a Design Basis Earthquake

A finding of very low safety-significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to determine the minimum cooling water system flow required after a design basis earthquake (DBE) to safely shutdown both reactors and to correctly translate these results into procedures. Specifically, the licensee failed to determine the cooling water flow rate necessary to shutdown both reactors after a DBE and ensure that this flow rate remained within the capacity of the emergency intake line. As a result, design bases were not correctly translated into procedures. The licensee confirmed through a preliminary calculation that the system remained operable.

The finding was determined to be more than minor because the failure to determine the cooling water flow necessary to shutdown both reactors after a DBE could have provided incorrect guidance in the procedure and to the operators. This finding is of very low safety-significance (Green) because the design deficiency was confirmed not to result in loss of operability or functionality. This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with its safety-significance and complexity [p1.d].

Inspection Report# : [2010008](#) (pdf)

Significance: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION FOR LER 05000306/2008-001-00

A NRC-identified issue and a NCV of 10 CFR 50.9 was identified when the inspectors discovered that Licensee Event Report (LER) 05000306/2008-001-00 was not complete and accurate in all material aspects. Specifically, the LER omitted information regarding when and how the licensee became aware that the Unit 2 component cooling water system was susceptible to failure following a postulated high energy line break in the turbine building. The omitted information was considered to be material to the NRC because it potentially affected the NRC's determination as to whether this issue would be characterized as an old design issue per Inspection Manual Chapter 0305. Subsequent to discovery of the deficiency, the licensee submitted Revision 1 to LER 05000306/2008-001 00, on January 19, 2009, which documented the originally omitted information.

This issue was determined to be more than minor because it affected the NRC's ability to perform its regulatory function. As a result, this finding was evaluated with the traditional enforcement process. Using the information provided in IMC 0612, Appendix B, "Issue Screening," this issue was determined to be a Severity Level IV NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This finding was determined to be cross cutting in the Human Performance, Work Control area, because the licensee failed to properly plan and coordinate work activities to address the impact of work on different job activities and the need for groups to communicate, coordinate, and cooperate with others during work activities (H.3(b)).

Inspection Report# : [2009005](#) (pdf)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE RESULTS IN FAILURE TO IDENTIFY ADVERSE TREND REGARDING COOLING WATER PUMP RIGHT ANGLE DRIVE FOULING

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50 Appendix B, Criterion V, due to the licensee's failure to accomplish an activity affecting quality in accordance with procedures. Specifically, licensee personnel failed to identify repeated blocking of the diesel-driven cooling water pumps right angle drive gear oil coolers with debris as an adverse trend even though blockages had been identified four times between July 2005 and August 2009. As a result, the adverse trend was not characterized as a significant condition adverse to quality as required by Procedure FP PA ARP 01, "Corrective Action Program Action Request Process." The failure to identify this issue as an adverse trend and a significant condition adverse to quality resulted in the untimely implementation of corrective actions to prevent recurrence and contributed to the August 27, 2009, inoperability of the 12 diesel-driven cooling water pumps. Corrective actions for this issue included the continued installation of ultrasonic flow meters to monitor flow to the right angle drive gear oil coolers and the implementation of a modification to strain the cooling water flow to the right angle drive gear oil coolers prior to performing the next zebra mussel treatment.

The finding was more than minor because the failure to properly implement the corrective action procedure impacted the equipment performance attribute of the Mitigating Systems cornerstone and the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because it did not involve a loss of safety function of a single train for greater than technical specification allowed outage time, did not

involve a loss of system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to appropriately use systematic processes (i.e., the corrective action, engineering change, and the preventive maintenance processes) when making safety significant decisions regarding the repeated blockage of the right angle drive gear oil coolers (H.1(a)).

Inspection Report# : [2009005](#) (*pdf*)

Significance: G Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO QUALIFY SAFETY-RELATED MOLDED CASE CIRCUIT BREAKERS

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Actions,” for the failure to promptly correct a condition adverse to quality regarding the expired qualification of safety-related molded case circuit breakers. Specifically, the licensee failed to evaluate extending the service life of safety-related molded case circuit breakers beyond the 20 year life expectancy, a condition adverse to quality. The licensee entered this issue into its corrective action program.

The finding was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” dated December 4, 2008, because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, an unqualified safety-related molded case circuit breaker could lead to higher trip times and potential unavailability of safety-related components associated with the bus when a circuit fault is present. The finding screened as of very low safety significance because the finding was a qualification deficiency confirmed not to have resulted in loss of operability or functionality in service. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, operating experience, because the licensee failed to implement maintenance information through changes to station processes and procedures to address the qualification of the breakers from Vendor Technical Bulletin 06-2.

Inspection Report# : [2009009](#) (*pdf*)

Significance: SL-III Aug 10, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Provide Complete Information to the NRC which Impacted a Licensing Decision.

On May 11, 2009, while reviewing an application to incorporate a medical restriction into an SRO’s operating license, an NRC inspector identified that Prairie Island Nuclear Generating Plant (PINGP) had provided incomplete and inaccurate information to the NRC when a license renewal was requested for the SRO in May 2007. The issue was considered to be of very low safety significance, but was considered to have important regulatory significance because the information was provided to the NRC under a signed statement and resulted in a licensing action that would not have been taken had complete and accurate information been provided to the NRC. This was an apparent violation of 10 CFR 50.9, “Completeness and Accuracy of Information.”

Because the issue affected the NRC’s ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The finding was determined to be of low safety significance because the licensed operator had taken medications as prescribed and had not made errors during any emergency condition prior to the license being amended.

However, the regulatory significance was important because the incomplete and inaccurate information was provided under a signed statement to the NRC and impacted a licensing decision for the licensed operator. This was preliminarily determined to be an apparent violation of 10 CFR 50.9, “Completeness and Accuracy of Information.” No cross-cutting element for this finding was assigned. This appears to be a misunderstanding of NRC reporting requirements since they changed in January 2006 and is not reflective of current plant standards or processes in this area.

Final Enforcement Action issued 10/27/09 with NOV as follows:

During an NRC inspection conducted on May 1, 2009, through August 10, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.9 requires, in part, that information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, Orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

10 CFR 55.23 requires, in part, that to certify the medical fitness of the applicant, an authorized representative of the facility licensee shall complete and sign NRC Form 396, "Certification of Medical Examination by Facility Licensee." NRC Form 396, when signed by an authorized representative of the facility licensee, certifies that a physician conducted a medical examination of the applicant and that the guidance contained in American National Standards Institute/American Nuclear Society (ANSI/ANS) Standard 3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants" was followed in conducting the examination and making the determination of medical qualification. ANSI/ANS 3.4-1983, Section 5.3, provides, in part, that the presence of certain medical conditions, unless adequately compensated by the methods specified in Subsections 5.3.1 through 5.3.9, shall disqualify the individual.

Contrary to the above, on May 11, 2007, the facility licensee provided information to the NRC that was not complete and accurate in all material respects. Specifically, the licensee submitted an NRC Form 396 for renewal of a senior reactor operator's license which certified that the applicant met the medical requirements of ANSI/ANS 3.4 1983 with only a restriction for corrective lenses. However, in July 1998, the senior reactor operator was prescribed medication to adequately compensate for a disqualifying medical condition. The certification by the senior licensee facility representative was material to the NRC because the NRC relied upon this certification and renewed the senior reactor operator's license pursuant to 10 CFR Part 55 without a restriction that the senior reactor operator was required to take medication as prescribed to maintain his qualification.

This is a Severity Level III violation (Supplement VII).

Inspection Report# : [2009012](#) (*pdf*)

Inspection Report# : [2009014](#) (*pdf*)

Inspection Report# : [2010002](#) (*pdf*)

Significance: **W** Jul 09, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure Design Measures Were Appropriately Established for the Unit 2 Component Cooling Water System

An inspector identified apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified due to the licensee's failure to establish design control measures to ensure that the design basis for the Unit 2 CCW system was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the safety related function of the CCW system was maintained following initiating events (such as high energy line break, seismic or tornado events) in the turbine building. This issue has been preliminarily determined to be of low to moderate safety significance (White). This issue was entered into the licensee's corrective action program as corrective action document 1145695. Upon identifying this issue, the licensee immediately declared the Unit 2 CCW system inoperable and entered Technical Specification 3.0.3. The Technical Specification was exited following the closure of several system isolation valves approximately 2 hours later. The closure of the isolation valves prevented the Unit 2 CCW system from being vulnerable to failure following events in the turbine building.

This finding was determined to be more than minor because it impacted the design control and external events aspects of the Mitigating Systems Cornerstone. The finding also impacted the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The initiating events in the turbine building could cause the CCW piping to fail. Loss of CCW inventory affects both trains of CCW based on the piping arrangement. The loss of both trains of CCW required a phase 3 significance determination. The results of the phase 3 assessment showed a delta core damage frequency of 3.2E-6, White. The cause of this finding was related to the cross cutting element of Human Performance, Decision Making because the licensee failed to make safety significant and risk significant decisions using a systematic process

to ensure that safety was maintained (H.1(a)). Since both the Unit 1 and Unit 2 cross-cutting aspects are from the same performance deficiency and are separated based on the risk determination, the aspect of H.1(a) counts as one cross-cutting aspect in this report. (Section 40A5.1).

Final SDP letter issued September 3, 2009, as a White violation.

Inspection Report# : [2009010](#) (*pdf*)

Inspection Report# : [2009013](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 04, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain a Standard Emergency Action Level Scheme

A licensee identified finding and associated Apparent Violation (AV) of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4) was identified for the failure to follow and maintain in effect emergency plans which use a standard emergency classification and action level scheme. Specifically, the licensee's emergency plan Alert emergency action levels (EALs) RA1.1 and RA1.2 specified instrument threshold values that were beyond the indicated ranges of the effluent radiation monitors.

The performance deficiency was determined to be more than minor because the deficiency, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, in the event of a radiological emergency, the deficiency could lead to the failure to declare two Alert conditions in a timely manner. The finding was evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Appendix B. Using the "Failure to Comply" flowchart, the performance deficiency screened as a risk significant planning standard problem. The inspector determined the problem was a degraded function, rather than function failure, because even though the two Alerts (RA1.1 and RA1.2) would not be able to be declared due to the EAL threshold values being beyond the range of the associated instruments, an Alert could be declared, although in a delayed manner, using RA1.3 which is based on a sample results. The degraded risk significant planning standard function resulted in a preliminary White finding.

Preliminary SDP/Choice Letter Issued - 04/08/2010.

Final Significance Determination letter Issued - 07/07/2010

Inspection Report# : [2010503](#) (*pdf*)

Inspection Report# : [2010504](#) (*pdf*)

Significance:  Aug 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE TECHNICAL SUPPORT CENTER VENTILATION SYSTEM TESTING

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR 50.54(q), associated with 10 CFR 50.47(b)(8), for failing to maintain the portion of the emergency plan in effect regarding the adequate maintenance of the Technical Support Center (TSC) emergency facility. Specifically, the implementation of procedure steps in Surveillance Procedure (SP) 1689, "TSC Ventilation System Operability Check," on January 25, 2009, resulted in the licensee's failure to test the TSC ventilation system in its as-found condition. As a result, the TSC ventilation system and an emergency preparedness planning standard were unknowingly degraded between July 26, 2008, and January 25, 2009. Corrective actions for this issue included ensuring that the TSC ventilation system was appropriately tested in July 2009 and revising SP 1689 to ensure that the TSC ventilation system was

appropriately tested in the future.

This finding was more than minor because it was associated with the attribute of meeting the planning standards of 10 CFR 50.47(b). In addition, the finding affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors used Section 4.8 of the Emergency Preparedness Significance Determination Process and concluded that this finding was of very low safety significance, because the associated emergency preparedness planning standard was not lost. The finding was determined to be cross-cutting in the area of Human Performance, Resources because procedure SP 1689 was not complete and accurate.

Inspection Report# : [2009009](#) (*pdf*)

Occupational Radiation Safety

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

VALVE TECHNICIAN BECAME INTERNALLY AND EXTERNALLY CONTAMINATED WHEN HE BREACHED THE RH-2-1 VALVE CONTRARY TO THE REQUIREMENTS OF THE RWP.

A self-revealed finding of very low safety-significance and an NCV of Technical Specification 5.4.1 was identified for the failure to implement written procedures in the area of radiation protection. Specifically, the licensee failed to meet radiation work permit requirements during a valve breach. As a result, a valve technician became internally and externally contaminated. Corrective actions for this issue included performance management of the personnel involved.

This finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone. In addition, the finding impacted the cornerstone objective of protecting worker health and safety from exposure to radiation. The inspectors determined that the finding was of very low safety significance, because the finding did not involve As-Low-As-Is-Reasonably Achievable planning or work controls, there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because personnel failed to follow procedures during the valve breach (H.4(b)).

Inspection Report# : [2009005](#) (*pdf*)

Public Radiation Safety

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

RADIOACTIVE WASTE BUILDING VENTILATION SYSTEM AND THE ASSOCIATED RADIATION DETECTOR BEING OUT OF SERVICE FOR EXTENDED PERIODS OF TIME WITHOUT INSTITUTING COMPENSATORY ACTIONS

An inspector-identified finding of very low safety-significance and an NCV of 10 CFR Part 20.1501 was identified for the failure to evaluate the potential radiological environmental dose impact associated with the extended non functionality of the radioactive waste building ventilation system and its radiation detector. As a result, compensatory measures were not established to compensate for the non functional equipment. Corrective actions for this issue included instituting compensatory radiological sampling and increasing the priority of the radwaste building ventilation system repairs.

This finding was more than minor because it was associated with the program and process attribute of the Public

Radiation Safety cornerstone. In addition, this finding impacted the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The inspectors determined that the finding was of very low safety significance because it did not involve radioactive material control, there was not a substantial failure to implement the radiological effluent program, and public dose was less than Appendix I criteria and 10 CFR 20.1301. The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action area, because although this long standing equipment issue had been documented in the licensee's corrective action program, the issue had not been fully evaluated nor had actions been taken to address the equipment deficiency in a timely manner (P.1(c)).

Inspection Report# : [2009005](#) (*pdf*)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 13, 2009

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

On the basis of the information reviewed, the team concluded that the corrective action (CA) program at Prairie Island was functional, but implementation was lacking in rigor resulting in inconsistent and undesirable results. In general, the licensee had a low threshold for identifying problems (issue reports called CAPs) and entering them in the CA program; however, some significant issues went unrecognized and therefore CAPs were not issued for these. Most items entered into the CA program were screened and prioritized in a timely manner using established criteria; however, inspectors observed inconsistency and lack of rigor in the screening process. Most issues, including operating experience, were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. However, the inspectors identified significant examples of issues with evaluation and corrective action shortcomings that resulted in inspection findings. The backlog of corrective actions was large and growing. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies, but the station was not taking full advantage of the processes and results. On the basis of interviews conducted during the inspection, and a review of the employee concerns program, workers at the site were willing to enter safety concerns into the CA program.

Inspectors continued to have concerns with the performance of the corrective action program. The last biennial problem identification and resolution inspection in 2007 was critical of program implementation and weaknesses were recognized by the licensee. An improvement effort was initiated. At the time of this inspection, inspectors concluded that performance had declined and another improvement plan was in progress. The current improvement program was not yet fully implemented and effective.

Inspection Report# : [2009009](#) (*pdf*)

Last modified : September 02, 2010

Prairie Island 2

3Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ADDRESS DESIGN VULNERABILITY RESULTS IN REACTOR TRIP

A self revealed finding of very low safety significance was identified following an automatic reactor trip on April 16, 2010. Specifically, the licensee failed to appropriately establish and implement actions to correct the causes of a turbine trip/reactor trip in 2001 and a turbine trip in 2003 even though the actions were required by the corrective action procedure in use at the time of the event. The failure to appropriately establish and implement actions to correct the causes of the previous events resulted in creating a large difference in Unit 2 condenser pressures while operating at lower power levels and a subsequent turbine trip/reactor trip. Corrective actions for this issue included correcting system deficiencies which led to the large difference in condenser pressures and improving procedural guidance regarding the sealing steam system.

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 Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance because it did not contribute to a reactor trip with mitigating equipment not available. No cross cutting aspect was assigned to this finding because the decisions made in regard to the 2001 and 2003 actions were made more than 2 years ago. No violation of NRC requirements was identified because the system deficiencies that contributed to the turbine trip/reactor trip were associated with non safety related systems. (Section 40A3.7)

Inspection Report# : [2010003](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT RHR WOULD BE CAPABLE TO RESPOND DURING MODE 4 EVENTS

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors on July 12, 2010, due to the failure to establish measures to assure that applicable regulatory requirements and the design basis for the residual heat removal (RHR) system were correctly translated into specifications, drawings, procedures and instructions. Specifically, the licensee failed to have appropriate procedures in place to ensure that the safety function of the RHR system was maintained following valve repositioning to support transitioning from the decay heat removal mode of RHR to providing suction from the refueling water storage tank (RWST) or following a Mode 4 loss of coolant accident.

This performance deficiency was determined to be more than minor because it was associated with the mitigating system cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this issue was of very low safety significance, because other systems were available for injection into the reactor coolant system and feed the steam generators; and due to the extremely low probability of a large loss of coolant accident during Mode 4 operations. This finding had no cross-cutting aspect since there was no performance characteristic from IMC 0310 that was a significant contributor to the performance deficiency.

Inspection Report# : [2010004](#) (*pdf*)

Significance: **G** Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Fuel Oil Storage Design Did Not Support EDGs 7-Day Supply

The inspectors identified a finding having 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 ensure that the fuel oil storage capability for emergency diesel generators (EDGs) D5 and D6 maintained the minimum volume required to run under accident conditions for seven days as specified in Regulatory Guide 1.137 "Fuel Oil Systems for Standby Diesel Generators." Specifically, with one tank out-of-service, as allowed per procedure, the licensee would not have enough fuel to meet the mission time for one diesel following a single failure of the opposite diesel during an accident conditions. This finding was entered into the licensee's corrective action program and a Temporary Change Request was initiated by the licensee to update the procedure until all issues associated with EDGs fuel oil storage capabilities (i.e., common mode failure, single failure, etc.), are resolved.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the EDG to respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because a single storage tank provided sufficient fuel for EDG operation under accident loads for a period greater than the 24-hour probabilistic risk assessment (PRA) mission time. This finding had a cross cutting aspect in the area of Human Performance, Decision Making, because the licensee failed to thoroughly evaluate the impact of downgrading the interconnection between the tanks to non-safety-related and the scenarios and existing practices that it would affect. (IMC 0310, Section 06.01.a.(2) [H.1(b)])

Inspection Report# : [2010006](#) (*pdf*)

Significance: **G** Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

LACK OF OPERATOR PROCEDURE USE DURING SYSTEM ALIGNMENT

A self revealed finding of very low safety significance and a non-cited violation of Technical Specification 5.4.1 was identified on April 9, 2010, due to the licensee's failure to implement Step 5.1.1 of Procedure FP G DOC 03, "Procedure Use and Adherence." Step 5.1.1 of FP G DOC 03 required that personnel perform activities affecting quality using working copies of continuous or reference use procedures. However, operations personnel failed to use a working copy of reference use Procedure C37.13, "Containment and Auxiliary Building Cooling System," when performing valve alignments to support the performance of a surveillance test. The failure to use a working copy of C37.13 resulted in the operator performing a valve alignment incorrectly and a loss of one-half of the Unit 2 containment cooling system. Corrective actions for this issue included restoring the containment cooling system, briefing licensee personnel on the event, and reinforcing the use of the human performance tools.

The inspectors determined that this finding was more than minor because it was associated with the human performance attribute of the Mitigating System 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 determined that this finding was of very low safety significance because it did not represent a loss of a system safety function, the fan coil units were inoperable for less than the Technical Specification allowed outage time, and the finding was not potentially risk significant due to external events. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel did not ensure human error prevention techniques were used such that work activities were performed safely (H.4(a)). (Section 40A3.8)

Inspection Report# : [2010003](#) (*pdf*)

Significance: **TBD** May 03, 2010

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Ensure Design Measures Were Appropriately Established for the Emergency Diesel Generator, Auxiliary Feedwater, and Safety Related Battery Systems (Section 40A5.1)

An apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors due to the licensee's failure to establish measures to ensure that engineered safety features such as the emergency diesel generators, the auxiliary feedwater system, and the safety related batteries were not adversely affected by events that cause turbine building flooding. As a result, flooding from these events would cause a loss of safety function for these systems. This issue was entered into the licensee's corrective action program (CAP) as CAP 1178236. Upon identifying this issue, the licensee implemented compensatory measures to ensure that the systems listed above were not adversely impacted following a turbine building internal flood.

This finding was determined to be more than minor because it impacted the design control and external events attributes of the Mitigating Systems cornerstone. The finding also impacted the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 3 evaluation was required because the finding represented a loss of safety function of multiple mitigating systems. A Phase 2 SDP evaluation was not performed because the Phase 2 SDP worksheets do not apply to internal flooding events. The results of the Phase 3 SDP assessment showed that this finding was potentially Greater than Green. No cross cutting aspect was assigned to this finding because licensee decisions made in regard to evaluating the susceptibility of mitigating systems equipment to turbine building internal flooding events were made more than 3 years ago and therefore, not reflective of current plant performance. (Section 4OA5.1)

Inspection Report# : [2010010](#) (pdf)

Inspection Report# : [2010011](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE COOLING WATER AND FUEL OIL SYSTEMS WERE PROTECTED FROM FLOODING IMPACTS

The inspectors identified finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement design control measures to ensure that the functions of the diesel-driven cooling water pumps (DDCLPs) and the fuel oil system were maintained following an internal flood in the plant screenhouse. Specifically, the licensee failed to address the need for additional fuel oil volume following the loss of the DDCLP fuel oil transfer pump motor starters due to the flood waters.

Immediate corrective actions included increasing the fuel oil volume in the fuel oil storage tanks. The licensee was also exploring the need to relocate the motor starters to an alternate location that would not be impacted by the flood waters.

The inspectors determined this finding was more than minor because the Mitigating Systems cornerstone design control attribute and objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. The inspectors determined that this finding was of very low safety significance because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This issue was not assigned a cross-cutting aspect since the cause dates back greater than 3 years and was not reflective of current performance.

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY IMPLEMENT OPERABILITY PROCEDURE

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V for the failure to adequately implement Procedure FP OP OL 01, "Operability/Functionality Determination." The failure to adequately implement this procedure resulted in the completion of determinations which failed to fully assess the safety function of the equipment, failed to fully evaluate information contained in the Updated Safety Analysis Report, or included information which questioned the component's ability to meet Technical Specification requirements. Corrective actions for this issue included initiating an adverse trend corrective action document, revising the impacted operability determinations, performing an apparent cause evaluation on the

programmatic weaknesses, and implementing additional corrective actions as necessary.

The inspectors determined that this issue was more than minor because the implementation weaknesses resulted in completing operability determinations which cast reasonable doubt on the continued operability of the equipment or demonstrated significant programmatic concerns that could lead to worse errors if not corrected. The inspectors determined that this issue was of very low safety significance because each of the conditions described in the determinations did not result in a loss of safety function of a single train for greater than the allowed outage time. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because although the licensee had formally defined and communicated the authority and roles for decisions affecting nuclear safety, the implementation of these roles and authorities were not as designed. In addition, the interdisciplinary reviews of these safety significant decisions were not always effective (H.1(a)).

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Mar 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Determine the Minimum Cooling Water System Flow Required After a Design Basis Earthquake

A finding of very low safety-significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to determine the minimum cooling water system flow required after a design basis earthquake (DBE) to safely shutdown both reactors and to correctly translate these results into procedures. Specifically, the licensee failed to determine the cooling water flow rate necessary to shutdown both reactors after a DBE and ensure that this flow rate remained within the capacity of the emergency intake line. As a result, design bases were not correctly translated into procedures. The licensee confirmed through a preliminary calculation that the system remained operable.

The finding was determined to be more than minor because the failure to determine the cooling water flow necessary to shutdown both reactors after a DBE could have provided incorrect guidance in the procedure and to the operators. This finding is of very low safety-significance (Green) because the design deficiency was confirmed not to result in loss of operability or functionality. This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with its safety-significance and complexity [p1.d].

Inspection Report# : [2010008](#) (*pdf*)

Significance: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION FOR LER 05000306/2008-001-00

A NRC-identified issue and a NCV of 10 CFR 50.9 was identified when the inspectors discovered that Licensee Event Report (LER) 05000306/2008-001-00 was not complete and accurate in all material aspects. Specifically, the LER omitted information regarding when and how the licensee became aware that the Unit 2 component cooling water system was susceptible to failure following a postulated high energy line break in the turbine building. The omitted information was considered to be material to the NRC because it potentially affected the NRC's determination as to whether this issue would be characterized as an old design issue per Inspection Manual Chapter 0305. Subsequent to discovery of the deficiency, the licensee submitted Revision 1 to LER 05000306/2008-001 00, on January 19, 2009, which documented the originally omitted information.

This issue was determined to be more than minor because it affected the NRC's ability to perform its regulatory function. As a result, this finding was evaluated with the traditional enforcement process. Using the information provided in IMC 0612, Appendix B, "Issue Screening," this issue was determined to be a Severity Level IV NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This finding was determined to be cross cutting in the Human Performance, Work Control area, because the licensee failed to properly plan and coordinate work activities to address the impact of work on different job activities and the need for groups to communicate, coordinate, and cooperate with others during work activities (H.3(b)).

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE RESULTS IN FAILURE TO IDENTIFY ADVERSE TREND REGARDING COOLING WATER PUMP RIGHT ANGLE DRIVE FOULING

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50 Appendix B, Criterion V, due to the licensee's failure to accomplish an activity affecting quality in accordance with procedures. Specifically, licensee personnel failed to identify repeated blocking of the diesel-driven cooling water pumps right angle drive gear oil coolers with debris as an adverse trend even though blockages had been identified four times between July 2005 and August 2009. As a result, the adverse trend was not characterized as a significant condition adverse to quality as required by Procedure FP PA ARP 01, "Corrective Action Program Action Request Process." The failure to identify this issue as an adverse trend and a significant condition adverse to quality resulted in the untimely implementation of corrective actions to prevent recurrence and contributed to the August 27, 2009, inoperability of the 12 diesel-driven cooling water pumps. Corrective actions for this issue included the continued installation of ultrasonic flow meters to monitor flow to the right angle drive gear oil coolers and the implementation of a modification to strain the cooling water flow to the right angle drive gear oil coolers prior to performing the next zebra mussel treatment.

The finding was more than minor because the failure to properly implement the corrective action procedure impacted the equipment performance attribute of the Mitigating Systems cornerstone and the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because it did not involve a loss of safety function of a single train for greater than technical specification allowed outage time, did not involve a loss of system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Human Performance, Decision Making area because the licensee failed to appropriately use systematic processes (i.e., the corrective action, engineering change, and the preventive maintenance processes) when making safety significant decisions regarding the repeated blockage of the right angle drive gear oil coolers (H.1(a)).

Barrier Integrity

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Adequacy of Voltage for Safety-Related Equipment

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to consider design basis accident temperature and voltage variations when performing an operability evaluation of safety-related equipment with very low voltage margin. Specifically, during the 2010 CDBI self-assessment, a licensee's reviewer identified concerns regarding an operability evaluation that failed to consider the design basis accident temperatures and voltage. Although the licensee placed this issue in their corrective action program, the licensee failed to assess operability. After identification by the team, the licensee determined the associated equipment were operable or operable but non-conforming.

The inspectors determined that this finding was more than minor because it was associated with Barrier Integrity cornerstone attribute of design control and affected 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 (Green) because the finding was a not degradation of a boundary, was not an open pathway and did not impact the hydrogen igniters. This finding had a cross-cutting aspect in the area of problem identification and resolution in the component of self assessment because the 2010 CDBI self-assessment concerns

were not evaluated and corrected. (IMC 0310, Section 06.02c.(3) [P3(c)]) (Section 1R21.3.b.(2))

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis Used to Determine PORV/LTOP Setpoint

The inspectors identified a finding having 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 have adequate calculation used to ensure reactor vessel 10 CFR Part 50, Appendix G limits are not exceeded. Specifically, the design calculation performed by Westinghouse to determine the pressurizer power operated relief valve (PORV) lift setting for low temperature overpressure protection (LTOP) analysis failed to include the correct inputs for mass addition transient, and also failed to consider the seismic and environmental terms in the instrument uncertainty calculations. The licensee subsequently entered this finding into their corrective action program and performed an operability evaluation and determined the PORVs remained operable and capable of performing their LTOP functions.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because it did not result in non-compliance with LTOP TS and the licensee's operability evaluation concluded that based on the last testing of the PORV opening stroke time, the predicted peak pressure was determined to be below the adjusted Appendix G pressure limit. Therefore, the PORVs remained operable and capable of performing their LTOP functions.

The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(3))

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

PORV Stroke Timing Acceptance Criteria Failed to Include Instrument Response Time

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to ensure adequate acceptance limits were incorporated into test procedures. Specifically, the acceptance criteria for allowable pressurizer power operated relief valve (PORV) opening stroke time within the periodic test procedure was not consistent with the original design criteria for low temperature overpressure protection (LTOP) analysis. The acceptance criteria limits did not include the instrument response time. This finding was entered into the licensee's corrective action program and a review of most recent tests showed the valves stroke time were acceptable and the valves were operable.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because the function of the PORV opening in the required time had always been maintained and the finding did not result in non-compliance with LTOP TS. This finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(4))

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Errors Found in the Electrical Relay Setting Calculation

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," related to calculational errors found in the licensee's relay setting analysis. Specifically, the protective relay setting calculation for Unit 2 4 KV safeguards switchgear failed to include the over-current relay setting calibration tolerance limits and failed to use the actual field measured value for offsite source transformer neutral grounding resistor in calculating the line to ground fault current. This finding was entered into the licensee's corrective action program and a preliminary verification performed by the licensee concluded that the relay settings were still acceptable.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability and reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because the licensee was able to demonstrate that the relay settings were still acceptable. The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(5))

Inspection Report# : [2010006](#) (pdf)

Emergency Preparedness

Significance:  Mar 04, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain a Standard Emergency Action Level Scheme

A licensee identified finding and associated Apparent Violation (AV) of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4) was identified for the failure to follow and maintain in effect emergency plans which use a standard emergency classification and action level scheme. Specifically, the licensee's emergency plan Alert emergency action levels (EALs) RA1.1 and RA1.2 specified instrument threshold values that were beyond the indicated ranges of the effluent radiation monitors.

The performance deficiency was determined to be more than minor because the deficiency, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, in the event of a radiological emergency, the deficiency could lead to the failure to declare two Alert conditions in a timely manner. The finding was evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Appendix B. Using the "Failure to Comply" flowchart, the performance deficiency screened as a risk significant planning standard problem. The inspector determined the problem was a degraded function, rather than function failure, because even though the two Alerts (RA1.1 and RA1.2) would not be able to be declared due to the EAL threshold values being beyond the range of the associated instruments, an Alert could be declared, although in a delayed manner, using RA1.3 which is based on a sample results. The degraded risk significant planning standard function resulted in a preliminary White finding.

Preliminary SDP/Choice Letter Issued - 04/08/2010.

Final Significance Determination letter Issued - 07/07/2010

Inspection Report# : [2010503](#) (pdf)

Inspection Report# : [2010504](#) (pdf)

Occupational Radiation Safety

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

VALVE TECHNICIAN BECAME INTERNALLY AND EXTERNALLY CONTAMINATED WHEN HE BREACHED THE RH-2-1 VALVE CONTRARY TO THE REQUIREMENTS OF THE RWP.

A self-revealed finding of very low safety-significance and an NCV of Technical Specification 5.4.1 was identified for the failure to implement written procedures in the area of radiation protection. Specifically, the licensee failed to meet radiation work permit requirements during a valve breach. As a result, a valve technician became internally and externally contaminated. Corrective actions for this issue included performance management of the personnel involved.

This finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone. In addition, the finding impacted the cornerstone objective of protecting worker health and safety from exposure to radiation. The inspectors determined that the finding was of very low safety significance, because the finding did not involve As-Low-As-Is-Reasonably Achievable planning or work controls, there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because personnel failed to follow procedures during the valve breach (H.4(b)).

Inspection Report# : [2009005](#) (pdf)

Public Radiation Safety

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

RADIOACTIVE WASTE BUILDING VENTILATION SYSTEM AND THE ASSOCIATED RADIATION DETECTOR BEING OUT OF SERVICE FOR EXTENDED PERIODS OF TIME WITHOUT INSTITUTING COMPENSATORY ACTIONS

An inspector-identified finding of very low safety-significance and an NCV of 10 CFR Part 20.1501 was identified for the failure to evaluate the potential radiological environmental dose impact associated with the extended non functionality of the radioactive waste building ventilation system and its radiation detector. As a result, compensatory measures were not established to compensate for the non functional equipment. Corrective actions for this issue included instituting compensatory radiological sampling and increasing the priority of the radwaste building ventilation system repairs.

This finding was more than minor because it was associated with the program and process attribute of the Public Radiation Safety cornerstone. In addition, this finding impacted the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The inspectors determined that the finding was of very low safety significance because it did not involve radioactive material control, there was not a substantial failure to implement the radiological effluent program, and public dose was less than Appendix I criteria and 10 CFR 20.1301. The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution, Corrective Action area, because although this long standing equipment issue had been documented in the licensee's corrective action program, the issue had not been fully evaluated nor had actions been taken to address the equipment deficiency in a timely manner (P.1(c)).

Inspection Report# : [2009005](#) (pdf)

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings

pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : November 29, 2010

Prairie Island 2

4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ADDRESS DESIGN VULNERABILITY RESULTS IN REACTOR TRIP

A self revealed finding of very low safety significance was identified following an automatic reactor trip on April 16, 2010. Specifically, the licensee failed to appropriately establish and implement actions to correct the causes of a turbine trip/reactor trip in 2001 and a turbine trip in 2003 even though the actions were required by the corrective action procedure in use at the time of the event. The failure to appropriately establish and implement actions to correct the causes of the previous events resulted in creating a large difference in Unit 2 condenser pressures while operating at lower power levels and a subsequent turbine trip/reactor trip. Corrective actions for this issue included correcting system deficiencies which led to the large difference in condenser pressures and improving procedural guidance regarding the sealing steam system.

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 Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance because it did not contribute to a reactor trip with mitigating equipment not available. No cross cutting aspect was assigned to this finding because the decisions made in regard to the 2001 and 2003 actions were made more than 2 years ago. No violation of NRC requirements was identified because the system deficiencies that contributed to the turbine trip/reactor trip were associated with non safety related systems. (Section 40A3.7)

Inspection Report# : [2010003](#) (*pdf*)

Mitigating Systems

Significance: G Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO APPROPRIATELY COMPLETE AN OPERABILITY DETERMINATION ON D5 EMERGENCY DIESEL GENERATOR (EDG).

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on November 12, 2010, due to the failure to complete an immediate operability determination for the D5 EDG in accordance with Procedure FP OP-OL-01, "Operability/Functionality Determination." Specifically, operations personnel failed to properly assess the impact of a malfunctioning fuel oil transfer system on the ability of the D5 EDG to perform its safety function as required by the procedure. Corrective actions for this issue included declaring the D5 EDG inoperable; repairing the fuel oil transfer system equipment deficiency; satisfactorily testing the D5 EDG following the equipment repairs; providing additional training on the operability process to operations personnel; and implementing a daily management review of operability decisions.

The inspectors determined that this issue was more than minor because it was associated with the human performance, procedure quality, and configuration control attributes of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because, although this potential design deficiency resulted in a loss of D5 EDG operability, it did not result in D5 inoperability for greater than TS allowed time, did not result in a loss of safety function for the Unit 2 EDGs and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event.

The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee had not taken appropriate corrective actions to address a previously identified adverse trend regarding the adequacy of operability determinations (P.1(d)).

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO INCLUDE 121 MOTOR DRIVEN COOLING WATER PUMP (MDCLP) COUPLING HARDNESS INFORMATION IN PROCUREMENT DOCUMENT.

A self-revealed finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion IV, was identified on July 25, 2010, due to the licensee's failure to specify the required 121 motor driven cooling water pump shaft coupling hardness as part of the procurement process. As a result, the pump was rendered unavailable due to a shaft coupling failure due to excessive hardness of the shaft. Corrective actions for this issue included repairing the cooling water pump and revising the procurement documents to include the required coupling hardness.

The inspectors determined that this issue was more than minor because it impacted the design control attribute of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed the Phase 1 and Phase 2 SDP evaluations and determined that a Phase 3 evaluation was required due to this issue being potentially greater than green. The Region III SRA determined that this finding was of very low safety significance because it did not represent an increase in the likelihood of a loss of cooling water initiating event due to different couplings being installed on the other cooling water pumps. The inspectors determined that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not use operating experience to support plant safety. Specifically, the licensee did not implement changes to the 121 motor driven cooling water pump after receiving and reviewing multiple pieces of operating experience regarding coupling failures due to hardness issues (P.2(b)).

Inspection Report# : [2010005](#) (pdf)

Significance: SL-IV Nov 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspector for the licensee's failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, "50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss," and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered "Yes" to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event.

In addition, the ROP finding of very low safety significance, Green, is dispositioned separately from the Traditional Enforcement violation and, therefore, the finding is being assigned a separate tracking number. Although there is an additional tracking number, the cross-cutting aspect is assigned only once. (FIN 05000306/2010012 02; Failure to Adequately Evaluate New Manual Operator Actions)

Significance:  Nov 05, 2010

Identified By: NRC

Item Type: FIN Finding

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” was identified by the inspector for the licensee’s failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, “50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss,” and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered “Yes” to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event. Based upon Phase 3 SDP evaluation performed by a NRC Region III Senior Risk Analyst (SRA), the inspector concluded that the issue was of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution area, corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions as necessary [P.1(c)].

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT RHR WOULD BE CAPABLE TO RESPOND DURING MODE 4 EVENTS

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors on July 12, 2010, due to the failure to establish measures to assure that applicable regulatory requirements and the design basis for the residual heat removal (RHR) system were correctly translated into specifications, drawings, procedures and instructions. Specifically, the licensee failed to have appropriate procedures in place to ensure that the safety function of the RHR system was maintained following valve repositioning to support transitioning from the decay heat removal mode of RHR to providing suction from the refueling water storage tank (RWST) or following a Mode 4 loss of coolant accident.

This performance deficiency was determined to be more than minor because it was associated with the mitigating system cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this issue was of very low safety significance, because other systems were available for injection into the reactor coolant system and feed the steam generators; and due to the extremely low probability of a large loss of coolant accident during Mode 4 operations. This finding had no cross-cutting aspect since there was no performance characteristic from IMC 0310 that was a significant contributor to the performance deficiency.

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Fuel Oil Storage Design Did Not Support EDGs 7-Day Supply

The inspectors identified a finding having 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 ensure that the fuel oil storage capability for emergency diesel generators (EDGs) D5 and D6 maintained the minimum volume required to run under accident conditions for seven days as specified in Regulatory Guide 1.137 "Fuel Oil Systems for Standby Diesel Generators." Specifically, with one tank out-of-service, as allowed per procedure, the licensee would not have enough fuel to meet the mission time for one diesel following a single failure of the opposite diesel during an accident conditions. This finding was entered into the licensee's corrective action program and a Temporary Change Request was initiated by the licensee to update the procedure until all issues associated with EDGs fuel oil storage capabilities (i.e., common mode failure, single failure, etc.), are resolved.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the EDG to respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because a single storage tank provided sufficient fuel for EDG operation under accident loads for a period greater than the 24-hour probabilistic risk assessment (PRA) mission time. This finding had a cross cutting aspect in the area of Human Performance, Decision Making, because the licensee failed to thoroughly evaluate the impact of downgrading the interconnection between the tanks to non-safety-related and the scenarios and existing practices that it would affect. (IMC 0310, Section 06.01.a.(2) [H.1(b)])

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Errors Found in the Electrical Relay Setting Calculation

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," related to calculational errors found in the licensee's relay setting analysis. Specifically, the protective relay setting calculation for Unit 2 4 KV safeguards switchgear failed to include the over-current relay setting calibration tolerance limits and failed to use the actual field measured value for offsite source transformer neutral grounding resistor in calculating the line to ground fault current. This finding was entered into the licensee's corrective action program and a preliminary verification performed by the licensee concluded that the relay settings were still acceptable.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability and reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because the licensee was able to demonstrate that the relay settings were still acceptable. The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(5))

Inspection Report# : [2010006](#) (pdf)

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

LACK OF OPERATOR PROCEDURE USE DURING SYSTEM ALIGNMENT

A self revealed finding of very low safety significance and a non-cited violation of Technical Specification 5.4.1 was identified on April 9, 2010, due to the licensee's failure to implement Step 5.1.1 of Procedure FP G DOC 03, "Procedure Use and Adherence." Step 5.1.1 of FP G DOC 03 required that personnel perform activities affecting quality using working copies of continuous or reference use procedures. However, operations personnel failed to use a working copy of reference use Procedure C37.13, "Containment and Auxiliary Building Cooling System," when performing valve alignments to support the performance of a surveillance test. The failure to use a working copy of C37.13 resulted in the operator performing a valve alignment incorrectly and a loss of one-half of the Unit 2 containment cooling system. Corrective actions for this issue included restoring the containment cooling system,

briefing licensee personnel on the event, and reinforcing the use of the human performance tools.

The inspectors determined that this finding was more than minor because it was associated with the human performance attribute of the Mitigating System 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 determined that this finding was of very low safety significance because it did not represent a loss of a system safety function, the fan coil units were inoperable for less than the Technical Specification allowed outage time, and the finding was not potentially risk significant due to external events. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel did not ensure human error prevention techniques were used such that work activities were performed safely (H.4(a)). (Section 40A3.8)

Inspection Report# : [2010003](#) (*pdf*)

Significance: TBD May 03, 2010

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Ensure Design Measures Were Appropriately Established for the Emergency Diesel Generator, Auxiliary Feedwater, and Safety Related Battery Systems (Section 40A5.1)

An apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors due to the licensee's failure to establish measures to ensure that engineered safety features such as the emergency diesel generators, the auxiliary feedwater system, and the safety related batteries were not adversely affected by events that cause turbine building flooding. As a result, flooding from these events would cause a loss of safety function for these systems. This issue was entered into the licensee's corrective action program (CAP) as CAP 1178236. Upon identifying this issue, the licensee implemented compensatory measures to ensure that the systems listed above were not adversely impacted following a turbine building internal flood.

This finding was determined to be more than minor because it impacted the design control and external events attributes of the Mitigating Systems cornerstone. The finding also impacted the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 3 evaluation was required because the finding represented a loss of safety function of multiple mitigating systems. A Phase 2 SDP evaluation was not performed because the Phase 2 SDP worksheets do not apply to internal flooding events. The results of the Phase 3 SDP assessment showed that this finding was potentially Greater than Green. No cross cutting aspect was assigned to this finding because licensee decisions made in regard to evaluating the susceptibility of mitigating systems equipment to turbine building internal flooding events were made more than 3 years ago and therefore, not reflective of current plant performance. (Section 40A5.1)

Inspection Report# : [2010010](#) (*pdf*)

Inspection Report# : [2010011](#) (*pdf*)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE COOLING WATER AND FUEL OIL SYSTEMS WERE PROTECTED FROM FLOODING IMPACTS

The inspectors identified finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement design control measures to ensure that the functions of the diesel-driven cooling water pumps (DDCLPs) and the fuel oil system were maintained following an internal flood in the plant screenhouse. Specifically, the licensee failed to address the need for additional fuel oil volume following the loss of the DDCLP fuel oil transfer pump motor starters due to the flood waters. Immediate corrective actions included increasing the fuel oil volume in the fuel oil storage tanks. The licensee was also exploring the need to relocate the motor starters to an alternate location that would not be impacted by the flood waters.

The inspectors determined this finding was more than minor because the Mitigating Systems cornerstone design control attribute and objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences were affected. The inspectors determined that this finding was of very low

safety significance because it did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This issue was not assigned a cross-cutting aspect since the cause dates back greater than 3 years and was not reflective of current performance.

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY IMPLEMENT OPERABILITY PROCEDURE

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V for the failure to adequately implement Procedure FP OP OL 01, “Operability/Functionality Determination.” The failure to adequately implement this procedure resulted in the completion of determinations which failed to fully assess the safety function of the equipment, failed to fully evaluate information contained in the Updated Safety Analysis Report, or included information which questioned the component’s ability to meet Technical Specification requirements. Corrective actions for this issue included initiating an adverse trend corrective action document, revising the impacted operability determinations, performing an apparent cause evaluation on the programmatic weaknesses, and implementing additional corrective actions as necessary.

The inspectors determined that this issue was more than minor because the implementation weaknesses resulted in completing operability determinations which cast reasonable doubt on the continued operability of the equipment or demonstrated significant programmatic concerns that could lead to worse errors if not corrected. The inspectors determined that this issue was of very low safety significance because each of the conditions described in the determinations did not result in a loss of safety function of a single train for greater than the allowed outage time. The inspectors determined that this finding was cross-cutting in the Human Performance, Decision Making area because although the licensee had formally defined and communicated the authority and roles for decisions affecting nuclear safety, the implementation of these roles and authorities were not as designed. In addition, the interdisciplinary reviews of these safety significant decisions were not always effective (H.1(a)).

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 26, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Determine the Minimum Cooling Water System Flow Required After a Design Basis Earthquake

A finding of very low safety-significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the failure to determine the minimum cooling water system flow required after a design basis earthquake (DBE) to safely shutdown both reactors and to correctly translate these results into procedures. Specifically, the licensee failed to determine the cooling water flow rate necessary to shutdown both reactors after a DBE and ensure that this flow rate remained within the capacity of the emergency intake line. As a result, design bases were not correctly translated into procedures. The licensee confirmed through a preliminary calculation that the system remained operable.

The finding was determined to be more than minor because the failure to determine the cooling water flow necessary to shutdown both reactors after a DBE could have provided incorrect guidance in the procedure and to the operators. This finding is of very low safety-significance (Green) because the design deficiency was confirmed not to result in loss of operability or functionality. This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with its safety-significance and complexity [p1.d].

Inspection Report# : [2010008](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK DURING PLANNED MAINTENANCE ACTIVITY.

The inspectors identified finding of very low safety significance and an NCV of 10 CFR 50.65 a(4) on August 31, 2010, due to a failure to properly assess and manage the risk associated with performing planned maintenance activities on the 111 switchgear unit cooler and the 121 control room chiller. Specifically, the licensee failed to identify these maintenance activities as high risk and implement additional risk management actions prior to starting the maintenance. As a result, an unexpected low suction pressure condition occurred on the 122 control room chiller pump. Corrective actions included restoring from the maintenance activities.

The inspectors determined the finding was more than minor because if left uncorrected, the failure to properly assess and manage plant risk could result in the need to shut down both reactors (a more significant safety concern) due to a loss of control room cooling function. This finding was determined to be of very low safety significance because it was not specific to the radiological barrier provided by the control room ventilation system; was not a degradation of the barrier function of the control room against smoke or a toxic atmosphere; did not represent an actual open pathway in the reactor containment; and it did not involve an actual reduction in the function of hydrogen igniters. The inspectors concluded that this finding was cross-cutting in the area of Human Performance, Work Control area because the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Adequacy of Voltage for Safety-Related Equipment

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to consider design basis accident temperature and voltage variations when performing an operability evaluation of safety-related equipment with very low voltage margin. Specifically, during the 2010 CDBI self-assessment, a licensee's reviewer identified concerns regarding an operability evaluation that failed to consider the design basis accident temperatures and voltage. Although the licensee placed this issue in their corrective action program, the licensee failed to assess operability. After identification by the team, the licensee determined the associated equipment were operable or operable but non-conforming.

The inspectors determined that this finding was more than minor because it was associated with Barrier Integrity cornerstone attribute of design control and affected 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 (Green) because the finding was a not degradation of a boundary, was not an open pathway and did not impact the hydrogen igniters. This finding had a cross-cutting aspect in the area of problem identification and resolution in the component of self assessment because the 2010 CDBI self-assessment concerns were not evaluated and corrected. (IMC 0310, Section 06.02c.(3) [P3(c)]) (Section 1R21.3.b.(2))

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis Used to Determine PORV/LTOP Setpoint

The inspectors identified a finding having 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 have adequate calculation used to ensure reactor vessel 10 CFR Part 50, Appendix G limits are not exceeded. Specifically, the design calculation performed by Westinghouse to determine the pressurizer power operated relief valve (PORV) lift setting for low temperature overpressure protection (LTOP) analysis failed to include the correct inputs for mass addition transient, and also failed to consider the seismic and environmental terms in the instrument uncertainty calculations. The licensee subsequently

entered this finding into their corrective action program and performed an operability evaluation and determined the PORVs remained operable and capable of performing their LTOP functions.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because it did not result in non-compliance with LTOP TS and the licensee's operability evaluation concluded that based on the last testing of the PORV opening stroke time, the predicted peak pressure was determined to be below the adjusted Appendix G pressure limit. Therefore, the PORVs remained operable and capable of performing their LTOP functions.

The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(3))

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

PORV Stroke Timing Acceptance Criteria Failed to Include Instrument Response Time

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to ensure adequate acceptance limits were incorporated into test procedures. Specifically, the acceptance criteria for allowable pressurizer power operated relief valve (PORV) opening stroke time within the periodic test procedure was not consistent with the original design criteria for low temperature overpressure protection (LTOP) analysis. The acceptance criteria limits did not include the instrument response time. This finding was entered into the licensee's corrective action program and a review of most recent tests showed the valves stroke time were acceptable and the valves were operable.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because the function of the PORV opening in the required time had always been maintained and the finding did not result in non-compliance with LTOP TS. This finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(4))

Inspection Report# : [2010006](#) (*pdf*)

Emergency Preparedness

Significance:  Mar 04, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain a Standard Emergency Action Level Scheme

A licensee identified finding and associated Apparent Violation (AV) of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4) was identified for the failure to follow and maintain in effect emergency plans which use a standard emergency classification and action level scheme. Specifically, the licensee's emergency plan Alert emergency action levels (EALs) RA1.1 and RA1.2 specified instrument threshold values that were beyond the indicated ranges of the effluent radiation monitors.

The performance deficiency was determined to be more than minor because the deficiency, if left uncorrected, would have the potential to lead to a more significant safety concern. Specifically, in the event of a radiological emergency,

the deficiency could lead to the failure to declare two Alert conditions in a timely manner. The finding was evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Appendix B. Using the "Failure to Comply" flowchart, the performance deficiency screened as a risk significant planning standard problem. The inspector determined the problem was a degraded function, rather than function failure, because even though the two Alerts (RA1.1 and RA1.2) would not be able to be declared due to the EAL threshold values being beyond the range of the associated instruments, an Alert could be declared, although in a delayed manner, using RA1.3 which is based on a sample results. The degraded risk significant planning standard function resulted in a preliminary White finding.

Preliminary SDP/Choice Letter Issued - 04/08/2010.

Final Significance Determination letter Issued - 07/07/2010

Inspection Report# : [2010503](#) (*pdf*)

Inspection Report# : [2010504](#) (*pdf*)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : March 03, 2011

Prairie Island 2

1Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

FAILURE TO ADDRESS DESIGN VULNERABILITY RESULTS IN REACTOR TRIP

A self revealed finding of very low safety significance was identified following an automatic reactor trip on April 16, 2010. Specifically, the licensee failed to appropriately establish and implement actions to correct the causes of a turbine trip/reactor trip in 2001 and a turbine trip in 2003 even though the actions were required by the corrective action procedure in use at the time of the event. The failure to appropriately establish and implement actions to correct the causes of the previous events resulted in creating a large difference in Unit 2 condenser pressures while operating at lower power levels and a subsequent turbine trip/reactor trip. Corrective actions for this issue included correcting system deficiencies which led to the large difference in condenser pressures and improving procedural guidance regarding the sealing steam system.

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 Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance because it did not contribute to a reactor trip with mitigating equipment not available. No cross cutting aspect was assigned to this finding because the decisions made in regard to the 2001 and 2003 actions were made more than 2 years ago. No violation of NRC requirements was identified because the system deficiencies that contributed to the turbine trip/reactor trip were associated with non safety related systems. (Section 40A3.7)

Inspection Report# : [2010003](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO APPROPRIATELY COMPLETE AN OPERABILITY DETERMINATION ON D5 EMERGENCY DIESEL GENERATOR (EDG).

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on November 12, 2010, due to the failure to complete an immediate operability determination for the D5 EDG in accordance with Procedure FP OP-OL-01, "Operability/Functionality Determination." Specifically, operations personnel failed to properly assess the impact of a malfunctioning fuel oil transfer system on the ability of the D5 EDG to perform its safety function as required by the procedure. Corrective actions for this issue included declaring the D5 EDG inoperable; repairing the fuel oil transfer system equipment deficiency; satisfactorily testing the D5 EDG following the equipment repairs; providing additional training on the operability process to operations personnel; and implementing a daily management review of operability decisions.

The inspectors determined that this issue was more than minor because it was associated with the human performance, procedure quality, and configuration control attributes of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because, although this potential design deficiency resulted in a loss of D5 EDG operability, it did not result in D5 inoperability for greater than TS allowed time, did not result in a loss of safety function for the Unit 2 EDGs and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event.

The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee had not taken appropriate corrective actions to address a previously identified adverse trend regarding the adequacy of operability determinations (P.1(d)).

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO INCLUDE 121 MOTOR DRIVEN COOLING WATER PUMP (MDCLP) COUPLING HARDNESS INFORMATION IN PROCUREMENT DOCUMENT.

A self-revealed finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion IV, was identified on July 25, 2010, due to the licensee's failure to specify the required 121 motor driven cooling water pump shaft coupling hardness as part of the procurement process. As a result, the pump was rendered unavailable due to a shaft coupling failure due to excessive hardness of the shaft. Corrective actions for this issue included repairing the cooling water pump and revising the procurement documents to include the required coupling hardness.

The inspectors determined that this issue was more than minor because it impacted the design control attribute of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed the Phase 1 and Phase 2 SDP evaluations and determined that a Phase 3 evaluation was required due to this issue being potentially greater than green. The Region III SRA determined that this finding was of very low safety significance because it did not represent an increase in the likelihood of a loss of cooling water initiating event due to different couplings being installed on the other cooling water pumps. The inspectors determined that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not use operating experience to support plant safety. Specifically, the licensee did not implement changes to the 121 motor driven cooling water pump after receiving and reviewing multiple pieces of operating experience regarding coupling failures due to hardness issues (P.2(b)).

Inspection Report# : [2010005](#) (pdf)

Significance: SL-IV Nov 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspector for the licensee's failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, "50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss," and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered "Yes" to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event.

In addition, the ROP finding of very low safety significance, Green, is dispositioned separately from the Traditional Enforcement violation and, therefore, the finding is being assigned a separate tracking number. Although there is an additional tracking number, the cross-cutting aspect is assigned only once. (FIN 05000306/2010012 02; Failure to Adequately Evaluate New Manual Operator Actions)

Significance:  Nov 05, 2010

Identified By: NRC

Item Type: FIN Finding

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” was identified by the inspector for the licensee’s failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, “50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss,” and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered “Yes” to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event. Based upon Phase 3 SDP evaluation performed by a NRC Region III Senior Risk Analyst (SRA), the inspector concluded that the issue was of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution area, corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions as necessary [P.1(c)].

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT RHR WOULD BE CAPABLE TO RESPOND DURING MODE 4 EVENTS

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors on July 12, 2010, due to the failure to establish measures to assure that applicable regulatory requirements and the design basis for the residual heat removal (RHR) system were correctly translated into specifications, drawings, procedures and instructions. Specifically, the licensee failed to have appropriate procedures in place to ensure that the safety function of the RHR system was maintained following valve repositioning to support transitioning from the decay heat removal mode of RHR to providing suction from the refueling water storage tank (RWST) or following a Mode 4 loss of coolant accident.

This performance deficiency was determined to be more than minor because it was associated with the mitigating system cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this issue was of very low safety significance, because other systems were available for injection into the reactor coolant system and feed the steam generators; and due to the extremely low probability of a large loss of coolant accident during Mode 4 operations. This finding had no cross-cutting aspect since there was no performance characteristic from IMC 0310 that was a significant contributor to the performance deficiency.

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Fuel Oil Storage Design Did Not Support EDGs 7-Day Supply

The inspectors identified a finding having 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 ensure that the fuel oil storage capability for emergency diesel generators (EDGs) D5 and D6 maintained the minimum volume required to run under accident conditions for seven days as specified in Regulatory Guide 1.137 "Fuel Oil Systems for Standby Diesel Generators." Specifically, with one tank out-of-service, as allowed per procedure, the licensee would not have enough fuel to meet the mission time for one diesel following a single failure of the opposite diesel during an accident conditions. This finding was entered into the licensee's corrective action program and a Temporary Change Request was initiated by the licensee to update the procedure until all issues associated with EDGs fuel oil storage capabilities (i.e., common mode failure, single failure, etc.), are resolved.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the EDG to respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because a single storage tank provided sufficient fuel for EDG operation under accident loads for a period greater than the 24-hour probabilistic risk assessment (PRA) mission time. This finding had a cross cutting aspect in the area of Human Performance, Decision Making, because the licensee failed to thoroughly evaluate the impact of downgrading the interconnection between the tanks to non-safety-related and the scenarios and existing practices that it would affect. (IMC 0310, Section 06.01.a.(2) [H.1(b)])

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Errors Found in the Electrical Relay Setting Calculation

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," related to calculational errors found in the licensee's relay setting analysis. Specifically, the protective relay setting calculation for Unit 2 4 KV safeguards switchgear failed to include the over-current relay setting calibration tolerance limits and failed to use the actual field measured value for offsite source transformer neutral grounding resistor in calculating the line to ground fault current. This finding was entered into the licensee's corrective action program and a preliminary verification performed by the licensee concluded that the relay settings were still acceptable.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability and reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because the licensee was able to demonstrate that the relay settings were still acceptable. The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(5))

Inspection Report# : [2010006](#) (pdf)

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

LACK OF OPERATOR PROCEDURE USE DURING SYSTEM ALIGNMENT

A self revealed finding of very low safety significance and a non-cited violation of Technical Specification 5.4.1 was identified on April 9, 2010, due to the licensee's failure to implement Step 5.1.1 of Procedure FP G DOC 03, "Procedure Use and Adherence." Step 5.1.1 of FP G DOC 03 required that personnel perform activities affecting quality using working copies of continuous or reference use procedures. However, operations personnel failed to use a working copy of reference use Procedure C37.13, "Containment and Auxiliary Building Cooling System," when performing valve alignments to support the performance of a surveillance test. The failure to use a working copy of C37.13 resulted in the operator performing a valve alignment incorrectly and a loss of one-half of the Unit 2 containment cooling system. Corrective actions for this issue included restoring the containment cooling system,

briefing licensee personnel on the event, and reinforcing the use of the human performance tools.

The inspectors determined that this finding was more than minor because it was associated with the human performance attribute of the Mitigating System 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 determined that this finding was of very low safety significance because it did not represent a loss of a system safety function, the fan coil units were inoperable for less than the Technical Specification allowed outage time, and the finding was not potentially risk significant due to external events. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel did not ensure human error prevention techniques were used such that work activities were performed safely (H.4(a)). (Section 40A3.8)
Inspection Report# : [2010003](#) (*pdf*)

Significance: TBD May 03, 2010

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Ensure Design Measures Were Appropriately Established for the Emergency Diesel Generator, Auxiliary Feedwater, and Safety Related Battery Systems (Section 40A5.1)

An apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors due to the licensee's failure to establish measures to ensure that engineered safety features such as the emergency diesel generators, the auxiliary feedwater system, and the safety related batteries were not adversely affected by events that cause turbine building flooding. As a result, flooding from these events would cause a loss of safety function for these systems. This issue was entered into the licensee's corrective action program (CAP) as CAP 1178236. Upon identifying this issue, the licensee implemented compensatory measures to ensure that the systems listed above were not adversely impacted following a turbine building internal flood.

This finding was determined to be more than minor because it impacted the design control and external events attributes of the Mitigating Systems cornerstone. The finding also impacted the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 3 evaluation was required because the finding represented a loss of safety function of multiple mitigating systems. A Phase 2 SDP evaluation was not performed because the Phase 2 SDP worksheets do not apply to internal flooding events. The results of the Phase 3 SDP assessment showed that this finding was potentially Greater than Green. No cross cutting aspect was assigned to this finding because licensee decisions made in regard to evaluating the susceptibility of mitigating systems equipment to turbine building internal flooding events were made more than 3 years ago and therefore, not reflective of current plant performance. (Section 40A5.1)

Inspection Report# : [2010010](#) (*pdf*)

Inspection Report# : [2010011](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK DURING PLANNED MAINTENANCE ACTIVITY.

The inspectors identified finding of very low safety significance and an NCV of 10 CFR 50.65 a(4) on August 31, 2010, due to a failure to properly assess and manage the risk associated with performing planned maintenance activities on the 111 switchgear unit cooler and the 121 control room chiller. Specifically, the licensee failed to identify these maintenance activities as high risk and implement additional risk management actions prior to starting the maintenance. As a result, an unexpected low suction pressure condition occurred on the 122 control room chiller pump. Corrective actions included restoring from the maintenance activities.

The inspectors determined the finding was more than minor because if left uncorrected, the failure to properly assess and manage plant risk could result in the need to shut down both reactors (a more significant safety concern) due to a

loss of control room cooling function. This finding was determined to be of very low safety significance because it was not specific to the radiological barrier provided by the control room ventilation system; was not a degradation of the barrier function of the control room against smoke or a toxic atmosphere; did not represent an actual open pathway in the reactor containment; and it did not involve an actual reduction in the function of hydrogen igniters. The inspectors concluded that this finding was cross-cutting in the area of Human Performance, Work Control area because the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Adequacy of Voltage for Safety-Related Equipment

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to consider design basis accident temperature and voltage variations when performing an operability evaluation of safety-related equipment with very low voltage margin. Specifically, during the 2010 CDBI self-assessment, a licensee's reviewer identified concerns regarding an operability evaluation that failed to consider the design basis accident temperatures and voltage. Although the licensee placed this issue in their corrective action program, the licensee failed to assess operability. After identification by the team, the licensee determined the associated equipment were operable or operable but non-conforming.

The inspectors determined that this finding was more than minor because it was associated with Barrier Integrity cornerstone attribute of design control and affected 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 (Green) because the finding was a not degradation of a boundary, was not an open pathway and did not impact the hydrogen igniters. This finding had a cross-cutting aspect in the area of problem identification and resolution in the component of self assessment because the 2010 CDBI self-assessment concerns were not evaluated and corrected. (IMC 0310, Section 06.02c.(3) [P3(c)]) (Section 1R21.3.b.(2))

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis Used to Determine PORV/LTOP Setpoint

The inspectors identified a finding having 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 have adequate calculation used to ensure reactor vessel 10 CFR Part 50, Appendix G limits are not exceeded. Specifically, the design calculation performed by Westinghouse to determine the pressurizer power operated relief valve (PORV) lift setting for low temperature overpressure protection (LTOP) analysis failed to include the correct inputs for mass addition transient, and also failed to consider the seismic and environmental terms in the instrument uncertainty calculations. The licensee subsequently entered this finding into their corrective action program and performed an operability evaluation and determined the PORVs remained operable and capable of performing their LTOP functions.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because it did not result in non-compliance with LTOP TS and the licensee's operability evaluation concluded that based on the last testing of the PORV opening stroke time, the predicted peak pressure was determined to be below the adjusted Appendix G pressure limit. Therefore, the PORVs remained operable and capable of performing their LTOP functions.

The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(3))

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

PORV Stroke Timing Acceptance Criteria Failed to Include Instrument Response Time

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to ensure adequate acceptance limits were incorporated into test procedures. Specifically, the acceptance criteria for allowable pressurizer power operated relief valve (PORV) opening stroke time within the periodic test procedure was not consistent with the original design criteria for low temperature overpressure protection (LTOP) analysis. The acceptance criteria limits did not include the instrument response time. This finding was entered into the licensee's corrective action program and a review of most recent tests showed the valves stroke time were acceptable and the valves were operable.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because the function of the PORV opening in the required time had always been maintained and the finding did not result in non-compliance with LTOP TS. This finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(4))

Inspection Report# : [2010006](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : June 07, 2011

Prairie Island 2

2Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Apr 15, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FLAMMABLE GAS CYLINDER STORED IN SAFETY-RELATED AREA.

An inspector-identified finding of very low safety significance and a non cited violation (NCV) of Technical Specification 5.4.1 was identified on February 8, 2011, due to the licensee's failure to establish, implement, and maintain procedures for the fire protection program. Specifically, the licensee failed to implement combustible control requirements prior to storing flammable material in a safety-related area. As a result, a gas cylinder containing flammable material was stored in the D6 emergency diesel generator radiator fan room for 1 week without the required additional fire loading evaluation completed. Corrective actions for this issue included entry of this issue into the corrective action program (CAP), removal of the cylinders from the radiator fan room, and the completion of both a human performance and a causal investigation.

The inspectors determined that this finding was more than minor because the presence of the gas cylinders could result in a fire affecting the ventilation system for the D6 emergency diesel generator. The finding was associated with the Initiating Events Cornerstone attribute of Protection against External Factors (Fire) and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using a Phase 2 SDP analysis, the inspectors calculated an upper bound change in CDF of 3.3×10^{-7} , which is consistent with a finding of very low safety significance. The inspectors determined that this finding was crosscutting in the Human Performance, Work Control area, because licensee personnel did not coordinate work activities consistent with nuclear safety, specifically in regard to the need to keep personnel apprised of the work impact and operational impact of the work activities. (H.3(b)).

Inspection Report# : [2011002](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

EVALUATION OF EQUIPMENT STORED NEAR SAFETY-RELATED EQUIPMENT.

A finding of very low safety significance and a NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors on February 17, 2011, due to the licensee's failure to maintain quality records in accordance with established requirements. Specifically, Procedure FP-G-RM-01, "Quality Assurance Records," designated engineering evaluations as permanent quality records that were required to be retained for the life of the plant. However, licensee personnel were unable to produce several engineering evaluations which had been completed to evaluate the acceptability of scaffolding storage areas in safety-related areas within the auxiliary building. Corrective actions included performing an extent-of-condition review and reconstitution of the engineering evaluations. The issue was entered into the CAP as CAP 1272888.

The inspectors determined that this finding was more than minor because it was similar to IMC 0612, Appendix E, "Examples of Minor Issues," Example 1b, which stated that recordkeeping issues were more than minor if required records were irretrievably lost. In this case, the inspectors identified that several engineering evaluations associated with the storage of scaffolding near safety-related equipment were irretrievably lost and required reconstitution. Additionally, the inspectors determined the finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective, since

the previously completed engineering evaluations were not available to show that the availability, reliability, and capability of equipment located in the scaffold storage areas was maintained. The inspectors evaluated the finding using the SDP and determined the finding was of very low safety significance because it did not result in a loss of system safety function; was not an actual loss of safety function for greater than the Technical Specification (TS) allowed outage time; and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting aspect was assigned to this finding as the missing engineering evaluations would have been completed more than 3 years ago and the failure to retain quality records was not reflective of current performance.
Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 EVALUATIONS DID NOT ADEQUATELY VERIFY THE DESIGN FOR SUSCEPTIBLE LOCATIONS OF GAS ACCUMULATION IN PIPING SYSTEMS.

The inspectors 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 failure to adequately review the design of emergency core cooling, decay heat removal, and containment spray systems for gas susceptible locations. Specifically, the licensee's original design reviews in response to Generic Letter 2008 01 did not identify all gas susceptible locations (i.e., pipe geometries that can accumulate gas). Corrective actions for this issue included the performance of ultrasonic examinations of most of the affected locations and did not find unacceptable void volumes. The licensee also evaluated the remaining locations for operability using alternative methods. There were no further operability concerns associated with these locations. The issue was entered into the CAP as CAP 1281658.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Mitigating Systems Cornerstone. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability. This finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not implement operating experience through training. Specifically, although relevant operating experience associated with gas susceptible locations was implemented in the procedures used to review the piping system design, the training provided did not adequately address the concepts portrayed by the operating experience contained in these procedures (P.2(b)). (Section 4OA5.6.c(1))

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

ALTERNATE METHODS WERE NOT DEVELOPED FOR MONITORING INACCESSIBLE SUSCEPTIBLE LOCATIONS.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to follow Procedure H64, "Gas Accumulation Management Program." Specifically, the licensee failed to develop alternate methods to monitor the potential for void formation at inaccessible susceptible locations that required periodic monitoring. The licensee performed an alternative assessment that reasonably demonstrated that each inaccessible location was not affected by the presence of an adverse void. The licensee also planned to perform an apparent cause evaluation. The issue was entered into the CAP as CAP 1281682.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that this finding was cross-cutting in the area of human performance, work practices, because supervisory and management oversight did not ensure personnel adherence to the Procedure H64 requirement for the disposition of inaccessible locations (H.4(c)).

Inspection Report# : [2011003](#) (pdf)

Significance:  May 20, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT THE TRAIN A AND THAIN B DC ELECTRICAL POWER SUBSYSTEMS REMAINED OPERABLE IN MODES 1 THROUGH 4.

A Non-Cited Violation (NCV) of Technical Specification (TS) 3.8.4 was identified by the inspectors due to the licensee's failure to maintain the train A and train B direct current electrical power subsystems operable while operating the reactor in Modes 1 through 4. Specifically, the licensee installed safety related battery chargers which were susceptible to failure during certain design basis events. This issue was entered into the licensee's corrective action program (CAP) as CAP 1250561. Upon identifying this issue, the licensee performed an operability evaluation and determined that the battery chargers remained operable because procedures were in place to recover the battery chargers if a failure occurred. After further interaction with the NRC, the licensee concluded that a designated operator position needed to be established to ensure that a specific individual would perform the battery charger recovery actions prior to the safety related batteries being depleted. Long term corrective actions included replacing all four battery chargers.

This finding was determined to be more than minor because it was associated with the design control and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre solved SDP worksheets for Prairie Island and determined that this finding screened as Red. A Phase 3 SDP evaluation was required to assess reasonable credit for recovery by operators. The results of the Phase 3 SDP evaluation showed that this finding was determined to be Green for Unit 2. No cross cutting aspect was assigned to this finding because licensee decisions made in regards to evaluating the performance of the battery chargers were made many years ago and therefore, not reflective of current plant performance.

Inspection Report# : [2011011](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO APPROPRIATELY COMPLETE AN OPERABILITY DETERMINATION ON D5 EMERGENCY DIESEL GENERATOR (EDG).

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on November 12, 2010, due to the failure to complete an immediate operability determination for the D5 EDG in accordance with Procedure FP OP-OL-01, "Operability/Functionality Determination." Specifically, operations personnel failed to properly assess the impact of a malfunctioning fuel oil transfer system on the ability of the D5 EDG to perform its safety function as required by the procedure. Corrective actions for this issue included declaring the D5 EDG inoperable; repairing the fuel oil transfer system equipment deficiency; satisfactorily testing the D5 EDG following the equipment repairs; providing additional training on the operability process to operations personnel; and implementing a daily management review of operability decisions.

The inspectors determined that this issue was more than minor because it was associated with the human performance, procedure quality, and configuration control attributes of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because, although this potential design deficiency resulted in a loss of D5 EDG operability, it did not result in D5 inoperability for greater than TS allowed time, did not result in a loss of safety function for the Unit 2 EDGs and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee had not taken appropriate corrective actions to address a previously identified adverse trend regarding the adequacy of operability determinations (P.1(d)).

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO INCLUDE 121 MOTOR DRIVEN COOLING WATER PUMP (MDCLP) COUPLING HARDNESS INFORMATION IN PROCUREMENT DOCUMENT.

A self-revealed finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion IV, was identified on July 25, 2010, due to the licensee's failure to specify the required 121 motor driven cooling water pump shaft coupling hardness as part of the procurement process. As a result, the pump was rendered unavailable due to a shaft coupling failure due to excessive hardness of the shaft. Corrective actions for this issue included repairing the cooling water pump and revising the procurement documents to include the required coupling hardness.

The inspectors determined that this issue was more than minor because it impacted the design control attribute of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed the Phase 1 and Phase 2 SDP evaluations and determined that a Phase 3 evaluation was required due to this issue being potentially greater than green. The Region III SRA determined that this finding was of very low safety significance because it did not represent an increase in the likelihood of a loss of cooling water initiating event due to different couplings being installed on the other cooling water pumps. The inspectors determined that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not use operating experience to support plant safety. Specifically, the licensee did not implement changes to the 121 motor driven cooling water pump after receiving and reviewing multiple pieces of operating experience regarding coupling failures due to hardness issues (P.2(b)).

Inspection Report# : [2010005](#) (pdf)

Significance: SL-IV Nov 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspector for the licensee's failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, "50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss," and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered "Yes" to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event.

In addition, the ROP finding of very low safety significance, Green, is dispositioned separately from the Traditional Enforcement violation and, therefore, the finding is being assigned a separate tracking number. Although there is an additional tracking number, the cross-cutting aspect is assigned only once. (FIN 05000306/2010012 02; Failure to Adequately Evaluate New Manual Operator Actions)

Inspection Report# : [2010012](#) (pdf)

Significance:  Nov 05, 2010

Identified By: NRC

Item Type: FIN Finding

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” was identified by the inspector for the licensee’s failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, “50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss,” and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered “Yes” to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event. Based upon Phase 3 SDP evaluation performed by a NRC Region III Senior Risk Analyst (SRA), the inspector concluded that the issue was of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution area, corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions as necessary [P.1(c)].

Inspection Report# : [2010012](#) (*pdf*)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT RHR WOULD BE CAPABLE TO RESPOND DURING MODE 4 EVENTS

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors on July 12, 2010, due to the failure to establish measures to assure that applicable regulatory requirements and the design basis for the residual heat removal (RHR) system were correctly translated into specifications, drawings, procedures and instructions. Specifically, the licensee failed to have appropriate procedures in place to ensure that the safety function of the RHR system was maintained following valve repositioning to support transitioning from the decay heat removal mode of RHR to providing suction from the refueling water storage tank (RWST) or following a Mode 4 loss of coolant accident.

This performance deficiency was determined to be more than minor because it was associated with the mitigating system cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this issue was of very low safety significance, because other systems were available for injection into the reactor coolant system and feed the steam generators; and due to the extremely low probability of a large loss of coolant accident during Mode 4 operations. This finding had no cross-cutting aspect since there was no performance characteristic from IMC 0310 that was a significant contributor to the performance deficiency.

Inspection Report# : [2010004](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Fuel Oil Storage Design Did Not Support EDGs 7-Day Supply

The inspectors identified a finding having 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 ensure that the fuel oil storage capability for

emergency diesel generators (EDGs) D5 and D6 maintained the minimum volume required to run under accident conditions for seven days as specified in Regulatory Guide 1.137 “Fuel Oil Systems for Standby Diesel Generators.” Specifically, with one tank out-of-service, as allowed per procedure, the licensee would not have enough fuel to meet the mission time for one diesel following a single failure of the opposite diesel during an accident conditions. This finding was entered into the licensee’s corrective action program and a Temporary Change Request was initiated by the licensee to update the procedure until all issues associated with EDGs fuel oil storage capabilities (i.e., common mode failure, single failure, etc.), are resolved.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability of the EDG to respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because a single storage tank provided sufficient fuel for EDG operation under accident loads for a period greater than the 24-hour probabilistic risk assessment (PRA) mission time. This finding had a cross cutting aspect in the area of Human Performance, Decision Making, because the licensee failed to thoroughly evaluate the impact of downgrading the interconnection between the tanks to non-safety-related and the scenarios and existing practices that it would affect. (IMC 0310, Section 06.01.a.(2) [H.1(b)])

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Errors Found in the Electrical Relay Setting Calculation

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” related to calculational errors found in the licensee’s relay setting analysis. Specifically, the protective relay setting calculation for Unit 2 4 KV safeguards switchgear failed to include the over-current relay setting calibration tolerance limits and failed to use the actual field measured value for offsite source transformer neutral grounding resistor in calculating the line to ground fault current. This finding was entered into the licensee’s corrective action program and a preliminary verification performed by the licensee concluded that the relay settings were still acceptable.

The inspectors determined that this finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring availability and reliability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance (Green) because the licensee was able to demonstrate that the relay settings were still acceptable. The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(5))

Inspection Report# : [2010006](#) (pdf)

Barrier Integrity

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

NO FULL FLOW TESTING OF PORV AIR SUPPLY CHECK VALVES.

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” was identified by the inspectors for the failure to assure that all testing required to demonstrate the check valves installed as part of a temporary modification for low temperature over pressure (LTOP) protection would perform satisfactory in service was identified and performed. Specifically, the licensee failed to verify the check valves would pass the necessary air flow to support the required number of valve strokes assumed in the LTOP analysis. The licensee performed a subsequent test and determined that the check valves would allow adequate air flow rate. The issue was entered into the CAP as CAP 1242980.

The inspectors determined this finding was more than minor because, if left uncorrected, the failure to demonstrate that the check valves would perform satisfactorily in service could result in installing an inadequately designed LTOP system each refueling outage. This finding impacted the Barrier Integrity Cornerstone. The inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that the issue screened out in Phase 1 and did not require a quantitative assessment, because the failure to perform the test did not result in a non-compliance with the LTOP TSs as listed in the various Attachment 1 checklists. Therefore, the finding was of very low safety significance, Green. The inspectors did not identify a cross-cutting aspect associated with this finding because decisions regarding the check valve testing were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUTE THE EFFECTS OF DYNAMIC LOADS AT THE CS DISCHARGE PIPING.

The inspectors 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 failure to evaluate the effects of dynamic loads at the containment spray discharge piping. Specifically, neither the structural design nor operation of the containment spray system addressed the dynamic loads that would result when the normally voided discharge piping rapidly fills up following system initiation. As a result of the inspectors concerns, the licensee performed an evaluation that showed that there was reasonable assurance that the system could tolerate the flow-induced dynamic loads following system initiation. The issue was entered into the CAP as CAP 1288035.

The performance deficiency was determined to be more than minor because it was associated with the structure, system, component and barrier performance attribute of the Barrier Integrity Cornerstone, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance using IMC 0609 Appendix H, "Containment Integrity Significance Determination Process," because it did not affect either core damage frequency or large early release frequency. The inspectors determined that this finding was cross-cutting in the area of problem identification and resolution because the licensee did not thoroughly evaluate external operating experience. Specifically, the licensee did not address the flow-induced dynamic loads at the containment spray discharge piping as it is rapidly filled up when evaluating the subject of gas accumulation/intrusion as requested by Generic Letter 2008-01 (P.2(a)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PRESCRIBE APPROPRIATE PROCEDURE FOR IN-SERVICE TESTING OF CHECK VALVES.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to develop appropriate procedures when performing in-service testing of check valves 2SI-16-4 and 2SI-16-6. Specifically, the applicable procedures were not revised to account for a recent modification that altered the flow path used when testing these valves. As a result, the potential to mask unacceptable in-service testing results existed, which would cause an inoperable condition to go undetected. The licensee entered the applicable TS for the missed test. Since this in-service test could only be performed during outage conditions, the licensee performed the risk assessment required by the TSs. The assessment showed that the risk to the plant due to the missed test was small. The licensee planned to perform the missed in-service test during the next Unit 2 refueling outage. The issue was entered into the CAP as CAP 1286638.

The inspectors determined that this performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Barrier Integrity Cornerstone. This finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment. The finding had a cross-cutting aspect in the area of human performance, work control, because the licensee did not appropriately coordinate work activities by incorporating actions to address

the need for work groups to communicate and coordinate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK DURING PLANNED MAINTENANCE ACTIVITY.

The inspectors identified finding of very low safety significance and an NCV of 10 CFR 50.65 a(4) on August 31, 2010, due to a failure to properly assess and manage the risk associated with performing planned maintenance activities on the 111 switchgear unit cooler and the 121 control room chiller. Specifically, the licensee failed to identify these maintenance activities as high risk and implement additional risk management actions prior to starting the maintenance. As a result, an unexpected low suction pressure condition occurred on the 122 control room chiller pump. Corrective actions included restoring from the maintenance activities.

The inspectors determined the finding was more than minor because if left uncorrected, the failure to properly assess and manage plant risk could result in the need to shut down both reactors (a more significant safety concern) due to a loss of control room cooling function. This finding was determined to be of very low safety significance because it was not specific to the radiological barrier provided by the control room ventilation system; was not a degradation of the barrier function of the control room against smoke or a toxic atmosphere; did not represent an actual open pathway in the reactor containment; and it did not involve an actual reduction in the function of hydrogen igniters. The inspectors concluded that this finding was cross-cutting in the area of Human Performance, Work Control area because the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Adequacy of Voltage for Safety-Related Equipment

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to consider design basis accident temperature and voltage variations when performing an operability evaluation of safety-related equipment with very low voltage margin. Specifically, during the 2010 CDBI self-assessment, a licensee's reviewer identified concerns regarding an operability evaluation that failed to consider the design basis accident temperatures and voltage. Although the licensee placed this issue in their corrective action program, the licensee failed to assess operability. After identification by the team, the licensee determined the associated equipment were operable or operable but non-conforming.

The inspectors determined that this finding was more than minor because it was associated with Barrier Integrity cornerstone attribute of design control and affected 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 (Green) because the finding was a not degradation of a boundary, was not an open pathway and did not impact the hydrogen igniters. This finding had a cross-cutting aspect in the area of problem identification and resolution in the component of self assessment because the 2010 CDBI self-assessment concerns were not evaluated and corrected. (IMC 0310, Section 06.02c.(3) [P3(c)]) (Section 1R21.3.b.(2))

Inspection Report# : [2010006](#) (*pdf*)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Analysis Used to Determine PORV/LTOP Setpoint

The inspectors identified a finding having 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 have adequate calculation used to ensure

reactor vessel 10 CFR Part 50, Appendix G limits are not exceeded. Specifically, the design calculation performed by Westinghouse to determine the pressurizer power operated relief valve (PORV) lift setting for low temperature overpressure protection (LTOP) analysis failed to include the correct inputs for mass addition transient, and also failed to consider the seismic and environmental terms in the instrument uncertainty calculations. The licensee subsequently entered this finding into their corrective action program and performed an operability evaluation and determined the PORVs remained operable and capable of performing their LTOP functions.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because it did not result in non-compliance with LTOP TS and the licensee's operability evaluation concluded that based on the last testing of the PORV opening stroke time, the predicted peak pressure was determined to be below the adjusted Appendix G pressure limit. Therefore, the PORVs remained operable and capable of performing their LTOP functions.

The finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(3))

Inspection Report# : [2010006](#) (pdf)

Significance:  Aug 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

PORV Stroke Timing Acceptance Criteria Failed to Include Instrument Response Time

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to ensure adequate acceptance limits were incorporated into test procedures. Specifically, the acceptance criteria for allowable pressurizer power operated relief valve (PORV) opening stroke time within the periodic test procedure was not consistent with the original design criteria for low temperature overpressure protection (LTOP) analysis. The acceptance criteria limits did not include the instrument response time. This finding was entered into the licensee's corrective action program and a review of most recent tests showed the valves stroke time were acceptable and the valves were operable.

The inspectors determined that this finding was more than minor because it was associated with the Barrier Integrity cornerstone attribute of design control and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. This finding was of very low safety significance (Green) because the function of the PORV opening in the required time had always been maintained and the finding did not result in non-compliance with LTOP TS. This finding did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R21.3.b.(4))

Inspection Report# : [2010006](#) (pdf)

Emergency Preparedness

Significance: SL-IV Apr 10, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INCOMPLETE AND INACCURATE EMERGENCY ACTION LEVEL CHANGE SUBMITTAL.

The NRC identified a Severity Level IV Non-Cited Violation of 10 CFR 50.9 for failing to provide complete and accurate information for prior approval of a new Emergency Action Level (EAL) scheme. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The submitted EAL scheme specified instrument threshold values for Alert classifications, EALs RA1.1 and RA1.2, which were beyond the indicated ranges of the effluent radiation monitors R 18, R-25, and R-31.

The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The violation potentially impedes or impacts the regulator process, it was dispositioned using the traditional enforcement process as described in NRC Inspection Manual Chapter 0612, Revision 04/30/10. Using Section 6.9 of the Enforcement Policy and after consultation with the Director of the Office of Enforcement, this issue was determined to be a Severity Level IV violation. Specifically, though the NRC would have questioned the issue with additional and correct information, the EAL ultimately would have been acceptable with an adjustment in the indicator range or EAL entry criteria value. In either case, it would not have resulted in substantial further inquiry. Additionally, the associated technical violation was determined to be of very low safety significance.

The associated performance deficiency is tracked as item 2011502-002.

Inspection Report# : [2011502](#) (*pdf*)

Significance:  Apr 07, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to identify that information provided to the NRC was Incomplete and Inaccurate regarding Emergency Action Level setpoints (1EP4.1.b)

The NRC identified a performance deficiency for the licensee's failure to identify that the EAL submittal sent to the NRC for Alert classification EALs RA1.1 and RA1.2 were beyond the range of the associated instruments, but the information was submitted to the NRC anyway. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The inspectors determined that the licensee's failure to provide complete and accurate information to the NRC, a violation of 10 CFR 50.9, was a performance deficiency and within the licensee's ability to foresee and prevent. The deficiency was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone attribute of Procedure Quality.

The associated Traditional Enforcement item is tracked as 2011502-001.

Inspection Report# : [2011502](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS THE IMPACT OF CHANGES IN THE PLANT'S ISOTOPIC PROFILE.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 20.1501.b due to the licensee's failure to evaluate the impact of changes in the isotopic profile (i.e., changes in the isotopic mix and percent abundance of specific radioisotopes) on the radiation monitoring instrumentation and the radiation assessment and measurement program. Corrective actions included performing an evaluation of the isotopic profile on the licensee's radiation monitoring instrumentation. No substantive adjustments to the program were necessary. The licensee also planned to revise applicable procedures to ensure that changes to the isotopic profile continued to be evaluated. The issue was entered into the CAP as CAP 1280900.

The inspectors determined that this finding was more than minor because, if left uncorrected, the performance deficiency would have led to a more significant safety concern. This finding was associated with the Occupational Radiation Safety Cornerstone. Additionally, this issue did not involve As-Low-As-Is Reasonably-Achievable planning or work controls; there was no overexposure or substantial potential for an overexposure to a worker; nor was the licensee's ability to assess dose compromised. Based on the information above, the inspectors concluded that the finding was of very low safety significance using IMC 0609, Appendix C, as guidance. The inspectors also reviewed the issue and no cross-cutting aspects were identified since decisions regarding the need to evaluate changes in the

isotopic mix were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : October 14, 2011

Prairie Island 2

3Q/2011 Plant Inspection Findings

Initiating Events

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72.

The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process. As a result, the NRC dispositions violations of 10 CFR 50.72 using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance.

The associated Performance Deficiency is tracked as item 2011-004-04.

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72. Finding.

The inspectors identified a finding associated with the Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process had an underlying performance deficiency. The underlying technical issue was evaluated using the SDP. In this case, the inspectors determined that the 2RY transformer locked out due to moisture entering a degraded bus duct, which was exposed to the environment. The licensee failed to identify the degraded bus duct earlier due to the inappropriate deferral of preventive maintenance activities. The inspectors determined that this issue was more than minor because it was associated with the protection against external factors attribute of the Initiating Events Cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Since the finding contributed to both the likelihood of a plant trip and that mitigating systems equipment or functions would not be available, a Region III Senior Reactor Analyst (SRA) was contacted for assistance. The results of the Phase 3 analysis

showed a change in core damage frequency of $2.4E-8$ /year, which represented a finding of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel failed to follow procedures regarding the preventive maintenance deferral process (H.4(b)).

The associated Traditional Enforcement NCV is tracked as item 2011-004-03.

Inspection Report# : [2011004](#) (pdf)

Significance: G Sep 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

UNIT 2 REACTOR TRIP DUE TO MIS-OPERATION OF SUBSTATION BREAKERS

A self-revealed finding of very low safety significance was identified by the inspectors due to personnel incorrectly implementing Procedure FP-G-DOC-03, "Procedure Use and Adherence." Specifically, maintenance personnel failed to adequately review, identify and correct potential problems associated with Procedure 5AWI 15.1.9, "Substation Work Control," to ensure that electrical substation (switchyard) high risk and/or critical activities conducted in November 2010 were appropriately observed. As a result, personnel failed to identify that a wire was not properly installed. The failure to install the wire led to the mis operation of multiple substation breakers, a turbine trip, and a Unit 2 reactor trip on May 9, 2011. The licensee initiated corrective action documents, Corrective Action Program (CAPs) 1284948 and 1284787, to document this event. Corrective actions for this issue included installing the wire and revising procedures to ensure that vulnerabilities associated with substation high risk/critical work activities were appropriately addressed. No violations of NRC requirements were identified due to substation components being non safety related.

The inspectors determined that the failure to correctly implement FP G DOC 03 was a performance deficiency that required a SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the protection from external factors attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, CAP area, because the licensee had not implemented and institutionalized operating experience associated with the performance of substation activities through changes to processes, procedures, equipment and training programs (P.2(b)).

Inspection Report# : [2011004](#) (pdf)

Significance: G Apr 15, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FLAMMABLE GAS CYLINDER STORED IN SAFETY-RELATED AREA.

An inspector-identified finding of very low safety significance and a non cited violation (NCV) of Technical Specification 5.4.1 was identified on February 8, 2011, due to the licensee's failure to establish, implement, and maintain procedures for the fire protection program. Specifically, the licensee failed to implement combustible control requirements prior to storing flammable material in a safety-related area. As a result, a gas cylinder containing flammable material was stored in the D6 emergency diesel generator radiator fan room for 1 week without the required additional fire loading evaluation completed. Corrective actions for this issue included entry of this issue into the corrective action program (CAP), removal of the cylinders from the radiator fan room, and the completion of both a human performance and a causal investigation.

The inspectors determined that this finding was more than minor because the presence of the gas cylinders could result in a fire affecting the ventilation system for the D6 emergency diesel generator. The finding was associated with the Initiating Events Cornerstone attribute of Protection against External Factors (Fire) and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using a Phase 2 SDP analysis, the inspectors calculated an upper bound change in CDF of 3.3×10^{-7} , which is consistent with a finding of very low safety significance. The inspectors determined that this finding was crosscutting in the Human Performance, Work Control area, because licensee

personnel did not coordinate work activities consistent with nuclear safety, specifically in regard to the need to keep personnel apprised of the work impact and operational impact of the work activities. (H.3(b)).

Inspection Report# : [2011002](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

RADIATION MONITORS NOT FULLY SCOPED INTO OR ASSESSED BY THE MAINTENANCE RULE PROGRAM.

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50.65 due to the licensee's failure to demonstrate that the performance or condition of the Unit 1 and Unit 2 radiation monitors was effectively controlled through the performance of appropriate preventive maintenance. As a result, the licensee failed to establish goals or monitor the performance of these monitors in accordance with paragraphs (a)(1) and (a)(2) of 10 CFR 50.65. In addition, the licensee also failed to scope radiation monitors used in the emergency operating procedures into the maintenance rule as required by 10 CFR 50.65 (b)(2)(i). The licensee initiated corrective action documents, CAPs 1303302 and 1304984, for these issues. The licensee's corrective actions included reviewing radiation monitoring information to ensure that all applicable radiation monitors were included in and assessed by the maintenance rule program.

The inspectors determined that this issue was more than minor because actual radiation monitor failures had occurred to the extent that the performance or condition of the monitors was not being effectively controlled through the completion of maintenance. This finding was also 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 determined that this finding was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Table 4a, could be answered "No." This issue was determined to be cross cutting in the Human Performance, Decision Making area, because the licensee did not appropriately validate their underlying assumptions when determining which radiation monitors needed to be included in the maintenance rule (H.1(b)). (Section 1R12.1)

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CORRECTIVE ACTION ASSIGNMENTS CLOSED WITHOUT COMPLETION OF TASKS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," due to the licensee's failure to close corrective action assignments in accordance with procedural requirements. Specifically, the licensee closed several corrective action assignments associated with evaluating and modifying piping and pipe supports without ensuring that the assignments were completed or that justifications were provided for not completing the assignments. The licensee documented this issue in corrective action documents, CAPs 1295772, 1296358 and 1297740. Corrective actions for this issue included evaluating why the procedural requirements were not followed and completing modifications for several feedwater system pipe supports.

The inspectors determined that the failure to ensure that corrective action assignments were closed in accordance with the procedural requirements provided in Procedure FP PA ARP 01, "CAP Action Request Process," was a performance deficiency that required an SDP evaluation. The inspectors determined that this finding was more than minor because, if left uncorrected, the failure to properly complete corrective action program assignments in accordance with procedural requirements could result in conditions adverse to quality remaining uncorrected. The inspectors determined that this finding was of very low safety significance because the finding was associated with a design deficiency that did not result in a loss of operability or functionality of the feedwater piping. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area, because the

assignments were not closed properly due to a failure to follow the corrective action procedure (H.4(b)). (Section 40A2.4)

Inspection Report# : [2011004](#) (pdf)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. As a result, the NRC dispositions these violations using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. (Section 40A3.9)

The associated Performance Deficiency is tracked as item 2011-004-07

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. The NRC evaluates the underlying technical issue using the SDP. In this case, the inspectors determined that the failure to operate the 11 containment and auxiliary building chiller in accordance with design could be assessed using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a. The inspectors concluded that the finding was of very low safety significance because each of the questions in Table 4a could be answered "No." Based on this, the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. No cross cutting aspect was assigned to this finding as the reason for operating the chiller outside of its design was not

associated with any of the components/aspects provided in NRC IMC 0310, "Components within the Cross Cutting Areas." (Section 4OA3.9)

The associated traditional enforcement item is tracked as item 2011-004-06.

Inspection Report# : [2011004](#) (pdf)

Significance: G Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

EVALUATION OF EQUIPMENT STORED NEAR SAFETY-RELATED EQUIPMENT.

A finding of very low safety significance and a NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors on February 17, 2011, due to the licensee's failure to maintain quality records in accordance with established requirements. Specifically, Procedure FP-G-RM-01, "Quality Assurance Records," designated engineering evaluations as permanent quality records that were required to be retained for the life of the plant. However, licensee personnel were unable to produce several engineering evaluations which had been completed to evaluate the acceptability of scaffolding storage areas in safety-related areas within the auxiliary building. Corrective actions included performing an extent-of-condition review and reconstitution of the engineering evaluations. The issue was entered into the CAP as CAP 1272888.

The inspectors determined that this finding was more than minor because it was similar to IMC 0612, Appendix E, "Examples of Minor Issues," Example 1b, which stated that recordkeeping issues were more than minor if required records were irretrievably lost. In this case, the inspectors identified that several engineering evaluations associated with the storage of scaffolding near safety-related equipment were irretrievably lost and required reconstitution. Additionally, the inspectors determined the finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective, since the previously completed engineering evaluations were not available to show that the availability, reliability, and capability of equipment located in the scaffold storage areas was maintained. The inspectors evaluated the finding using the SDP and determined the finding was of very low safety significance because it did not result in a loss of system safety function; was not an actual loss of safety function for greater than the Technical Specification (TS) allowed outage time; and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting aspect was assigned to this finding as the missing engineering evaluations would have been completed more than 3 years ago and the failure to retain quality records was not reflective of current performance.

Inspection Report# : [2011003](#) (pdf)

Significance: G Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 EVALUATIONS DID NOT ADEQUATELY VERIFY THE DESIGN FOR SUSCEPTIBLE LOCATIONS OF GAS ACCUMULATION IN PIPING SYSTEMS.

The inspectors 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 failure to adequately review the design of emergency core cooling, decay heat removal, and containment spray systems for gas susceptible locations. Specifically, the licensee's original design reviews in response to Generic Letter 2008 01 did not identify all gas susceptible locations (i.e., pipe geometries that can accumulate gas). Corrective actions for this issue included the performance of ultrasonic examinations of most of the affected locations and did not find unacceptable void volumes. The licensee also evaluated the remaining locations for operability using alternative methods. There were no further operability concerns associated with these locations. The issue was entered into the CAP as CAP 1281658.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Mitigating Systems Cornerstone. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability. This finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not implement operating experience through training. Specifically, although relevant operating experience associated with gas susceptible locations was implemented in the procedures used to review the piping system design, the training provided did not adequately address the concepts

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

ALTERNATE METHODS WERE NOT DEVELOPED FOR MONITORING INACCESSIBLE SUSCEPTIBLE LOCATIONS.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to follow Procedure H64, "Gas Accumulation Management Program." Specifically, the licensee failed to develop alternate methods to monitor the potential for void formation at inaccessible susceptible locations that required periodic monitoring. The licensee performed an alternative assessment that reasonably demonstrated that each inaccessible location was not affected by the presence of an adverse void. The licensee also planned to perform an apparent cause evaluation. The issue was entered into the CAP as CAP 1281682.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that this finding was cross-cutting in the area of human performance, work practices, because supervisory and management oversight did not ensure personnel adherence to the Procedure H64 requirement for the disposition of inaccessible locations (H.4(c)).
Inspection Report# : [2011003](#) (pdf)

Significance:  May 20, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT THE TRAIN A AND THAIN B DC ELECTRICAL POWER SUBSYSTEMS REMAINED OPERABLE IN MODES 1 THROUGH 4.

A Non-Cited Violation (NCV) of Technical Specification (TS) 3.8.4 was identified by the inspectors due to the licensee's failure to maintain the train A and train B direct current electrical power subsystems operable while operating the reactor in Modes 1 through 4. Specifically, the licensee installed safety related battery chargers which were susceptible to failure during certain design basis events. This issue was entered into the licensee's corrective action program (CAP) as CAP 1250561. Upon identifying this issue, the licensee performed an operability evaluation and determined that the battery chargers remained operable because procedures were in place to recover the battery chargers if a failure occurred. After further interaction with the NRC, the licensee concluded that a designated operator position needed to be established to ensure that a specific individual would perform the battery charger recovery actions prior to the safety related batteries being depleted. Long term corrective actions included replacing all four battery chargers.

This finding was determined to be more than minor because it was associated with the design control and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre solved SDP worksheets for Prairie Island and determined that this finding screened as Red. A Phase 3 SDP evaluation was required to assess reasonable credit for recovery by operators. The results of the Phase 3 SDP evaluation showed that this finding was determined to be Green for Unit 2. No cross cutting aspect was assigned to this finding because licensee decisions made in regards to evaluating the performance of the battery chargers were made many years ago and therefore, not reflective of current plant performance.

Significance: **G** Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO APPROPRIATELY COMPLETE AN OPERABILITY DETERMINATION ON D5 EMERGENCY DIESEL GENERATOR (EDG).

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on November 12, 2010, due to the failure to complete an immediate operability determination for the D5 EDG in accordance with Procedure FP OP-OL-01, "Operability/Functionality Determination." Specifically, operations personnel failed to properly assess the impact of a malfunctioning fuel oil transfer system on the ability of the D5 EDG to perform its safety function as required by the procedure. Corrective actions for this issue included declaring the D5 EDG inoperable; repairing the fuel oil transfer system equipment deficiency; satisfactorily testing the D5 EDG following the equipment repairs; providing additional training on the operability process to operations personnel; and implementing a daily management review of operability decisions.

The inspectors determined that this issue was more than minor because it was associated with the human performance, procedure quality, and configuration control attributes of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because, although this potential design deficiency resulted in a loss of D5 EDG operability, it did not result in D5 inoperability for greater than TS allowed time, did not result in a loss of safety function for the Unit 2 EDGs and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee had not taken appropriate corrective actions to address a previously identified adverse trend regarding the adequacy of operability determinations (P.1(d)).

Inspection Report# : [2010005](#) (*pdf*)

Significance: **G** Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO INCLUDE 121 MOTOR DRIVEN COOLING WATER PUMP (MDCLP) COUPLING HARDNESS INFORMATION IN PROCUREMENT DOCUMENT.

A self-revealed finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion IV, was identified on July 25, 2010, due to the licensee's failure to specify the required 121 motor driven cooling water pump shaft coupling hardness as part of the procurement process. As a result, the pump was rendered unavailable due to a shaft coupling failure due to excessive hardness of the shaft. Corrective actions for this issue included repairing the cooling water pump and revising the procurement documents to include the required coupling hardness.

The inspectors determined that this issue was more than minor because it impacted the design control attribute of the Mitigating Systems Cornerstone. This finding also impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed the Phase 1 and Phase 2 SDP evaluations and determined that a Phase 3 evaluation was required due to this issue being potentially greater than green. The Region III SRA determined that this finding was of very low safety significance because it did not represent an increase in the likelihood of a loss of cooling water initiating event due to different couplings being installed on the other cooling water pumps. The inspectors determined that this finding was cross-cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not use operating experience to support plant safety. Specifically, the licensee did not implement changes to the 121 motor driven cooling water pump after receiving and reviewing multiple pieces of operating experience regarding coupling failures due to hardness issues (P.2(b)).

Inspection Report# : [2010005](#) (*pdf*)

Significance: **SL-IV** Nov 05, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspector

for the licensee's failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, "50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss," and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered "Yes" to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event.

In addition, the ROP finding of very low safety significance, Green, is dispositioned separately from the Traditional Enforcement violation and, therefore, the finding is being assigned a separate tracking number. Although there is an additional tracking number, the cross-cutting aspect is assigned only once. (FIN 05000306/2010012 02; Failure to Adequately Evaluate New Manual Operator Actions)

Inspection Report# : [2010012](#) (pdf)

Significance:  Nov 05, 2010

Identified By: NRC

Item Type: FIN Finding

INADEQUATE 50.59 EVALUATION FOR NEW MANUAL OPERATOR ACTIONS.

A Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspector for the licensee's failure to provide an evaluation that adequately documented why implementing new manual operator actions during periods of adverse weather, which isolated portions of the component cooling water system susceptible to hazards associated with tornado-generated missiles, did not present a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR). The licensee initiated CAP 1257118, "50.59 Screening Not Sufficient – 122 Spent Fuel Pool Heat Exchanger Component Cooling Loss," and, at the end of the inspection, was in the process of correcting the deficiency.

The violation was determined to be more than minor because the inspector could not reasonably determine that the changes would not have ultimately required prior NRC approval. Violations of 10 CFR 50.59 are dispositioned using Traditional Enforcement process instead of the SDP because they are considered to be violations that could potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspector determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a, for the Mitigating Systems Cornerstone. The inspector answered "Yes" to Question 5 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet because the inspector concluded that the finding screened as potentially risk significant due to a severe weather initiating event. Based upon Phase 3 SDP evaluation performed by a NRC Region III Senior Risk Analyst (SRA), the inspector concluded that the issue was of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Problem Identification and Resolution area, corrective action component, because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions as necessary [P.1(c)].

Inspection Report# : [2010012](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

NO FULL FLOW TESTING OF PORV AIR SUPPLY CHECK VALVES.

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to assure that all testing required to demonstrate the check valves installed as part of a temporary modification for low temperature over pressure (LTOP) protection would perform satisfactory in service was identified and performed. Specifically, the licensee failed to verify the check valves would pass the necessary air flow to support the required number of valve strokes assumed in the LTOP analysis. The licensee performed a subsequent test and determined that the check valves would allow adequate air flow rate. The issue was entered into the CAP as CAP 1242980.

The inspectors determined this finding was more than minor because, if left uncorrected, the failure to demonstrate that the check valves would perform satisfactorily in service could result in installing an inadequately designed LTOP system each refueling outage. This finding impacted the Barrier Integrity Cornerstone. The inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that the issue screened out in Phase 1 and did not require a quantitative assessment, because the failure to perform the test did not result in a non-compliance with the LTOP TSSs as listed in the various Attachment 1 checklists. Therefore, the finding was of very low safety significance, Green. The inspectors did not identify a cross-cutting aspect associated with this finding because decisions regarding the check valve testing were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUTE THE EFFECTS OF DYNAMIC LOADS AT THE CS DISCHARGE PIPING.

The inspectors 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 failure to evaluate the effects of dynamic loads at the containment spray discharge piping. Specifically, neither the structural design nor operation of the containment spray system addressed the dynamic loads that would result when the normally voided discharge piping rapidly fills up following system initiation. As a result of the inspectors concerns, the licensee performed an evaluation that showed that there was reasonable assurance that the system could tolerate the flow-induced dynamic loads following system initiation. The issue was entered into the CAP as CAP 1288035.

The performance deficiency was determined to be more than minor because it was associated with the structure, system, component and barrier performance attribute of the Barrier Integrity Cornerstone, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance using IMC 0609 Appendix H, "Containment Integrity Significance Determination Process," because it did not affect either core damage frequency or large early release frequency. The inspectors determined that this finding was cross-cutting in the area of problem identification and resolution because the licensee did not thoroughly evaluate external operating experience. Specifically, the licensee did not address the flow-induced dynamic loads at the containment spray discharge piping as it is rapidly filled up when evaluating the subject of gas accumulation/intrusion as requested by Generic Letter 2008-01 (P.2(a)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PRESCRIBE APPROPRIATE PROCEDURE FOR IN-SERVICE TESTING OF CHECK VALVES.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to develop appropriate procedures

when performing in-service testing of check valves 2SI-16-4 and 2SI-16-6. Specifically, the applicable procedures were not revised to account for a recent modification that altered the flow path used when testing these valves. As a result, the potential to mask unacceptable in-service testing results existed, which would cause an inoperable condition to go undetected. The licensee entered the applicable TS for the missed test. Since this in-service test could only be performed during outage conditions, the licensee performed the risk assessment required by the TSs. The assessment showed that the risk to the plant due to the missed test was small. The licensee planned to perform the missed in-service test during the next Unit 2 refueling outage. The issue was entered into the CAP as CAP 1286638.

The inspectors determined that this performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Barrier Integrity Cornerstone. This finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment. The finding had a cross-cutting aspect in the area of human performance, work control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the need for work groups to communicate and coordinate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK DURING PLANNED MAINTENANCE ACTIVITY.

The inspectors identified finding of very low safety significance and an NCV of 10 CFR 50.65 a(4) on August 31, 2010, due to a failure to properly assess and manage the risk associated with performing planned maintenance activities on the 111 switchgear unit cooler and the 121 control room chiller. Specifically, the licensee failed to identify these maintenance activities as high risk and implement additional risk management actions prior to starting the maintenance. As a result, an unexpected low suction pressure condition occurred on the 122 control room chiller pump. Corrective actions included restoring from the maintenance activities.

The inspectors determined the finding was more than minor because if left uncorrected, the failure to properly assess and manage plant risk could result in the need to shut down both reactors (a more significant safety concern) due to a loss of control room cooling function. This finding was determined to be of very low safety significance because it was not specific to the radiological barrier provided by the control room ventilation system; was not a degradation of the barrier function of the control room against smoke or a toxic atmosphere; did not represent an actual open pathway in the reactor containment; and it did not involve an actual reduction in the function of hydrogen igniters. The inspectors concluded that this finding was cross-cutting in the area of Human Performance, Work Control area because the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2010005](#) (*pdf*)

Emergency Preparedness

Significance: SL-IV Apr 10, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INCOMPLETE AND INACCURATE EMERGENCY ACTION LEVEL CHANGE SUBMITTAL.

The NRC identified a Severity Level IV Non-Cited Violation of 10 CFR 50.9 for failing to provide complete and accurate information for prior approval of a new Emergency Action Level (EAL) scheme. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The submitted EAL scheme specified instrument threshold values for Alert classifications, EALs RA1.1 and RA1.2, which were beyond the indicated ranges of the effluent radiation monitors R 18, R-25, and R-31. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The violation potentially impedes or impacts the regulator process, it was dispositioned using the traditional enforcement process as described in NRC Inspection Manual Chapter 0612, Revision 04/30/10. Using Section 6.9 of

the Enforcement Policy and after consultation with the Director of the Office of Enforcement, this issue was determined to be a Severity Level IV violation. Specifically, though the NRC would have questioned the issue with additional and correct information, the EAL ultimately would have been acceptable with an adjustment in the indicator range or EAL entry criteria value. In either case, it would not have resulted in substantial further inquiry. Additionally, the associated technical violation was determined to be of very low safety significance.

The associated performance deficiency is tracked as item 2011502-002.

Inspection Report# : [2011502](#) (*pdf*)

Significance:  Apr 07, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to identify that information provided to the NRC was Incomplete and Inaccurate regarding Emergency Action Level setpoints (1EP4.1.b)

The NRC identified a performance deficiency for the licensee's failure to identify that the EAL submittal sent to the NRC for Alert classification EALs RA1.1 and RA1.2 were beyond the range of the associated instruments, but the information was submitted to the NRC anyway. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The inspectors determined that the licensee's failure to provide complete and accurate information to the NRC, a violation of 10 CFR 50.9, was a performance deficiency and within the licensee's ability to foresee and prevent. The deficiency was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone attribute of Procedure Quality.

The associated Traditional Enforcement item is tracked as 2011502-001.

Inspection Report# : [2011502](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS THE IMPACT OF CHANGES IN THE PLANT'S ISOTOPIC PROFILE.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 20.1501.b due to the licensee's failure to evaluate the impact of changes in the isotopic profile (i.e., changes in the isotopic mix and percent abundance of specific radioisotopes) on the radiation monitoring instrumentation and the radiation assessment and measurement program. Corrective actions included performing an evaluation of the isotopic profile on the licensee's radiation monitoring instrumentation. No substantive adjustments to the program were necessary. The licensee also planned to revise applicable procedures to ensure that changes to the isotopic profile continued to be evaluated. The issue was entered into the CAP as CAP 1280900.

The inspectors determined that this finding was more than minor because, if left uncorrected, the performance deficiency would have led to a more significant safety concern. This finding was associated with the Occupational Radiation Safety Cornerstone. Additionally, this issue did not involve As-Low-As-Is Reasonably-Achievable planning or work controls; there was no overexposure or substantial potential for an overexposure to a worker; nor was the licensee's ability to assess dose compromised. Based on the information above, the inspectors concluded that the finding was of very low safety significance using IMC 0609, Appendix C, as guidance. The inspectors also reviewed the issue and no cross-cutting aspects were identified since decisions regarding the need to evaluate changes in the isotopic mix were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : January 04, 2012

Prairie Island 2

4Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Flammable Gas Bottles Installed and/or Stored in the Auxiliary Building

The inspectors 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 III, "Design Control," for the licensee's failure to check the adequacy of design for flammable gas bottles installed in areas located within the auxiliary building and their impact on safety-related cables and equipment. Specifically, the licensee failed to evaluate how a failure of the flammable gas bottles and a resulting fire or explosion at the installed locations could impact nearby safety-related structures, systems, or components. The licensee entered this issue into their corrective action program to review the placement of the flammable gas bottles.

The inspectors determined that the finding was more than minor because the finding was associated with the Initiating Events cornerstone's attribute of Protection against External Factors (Fire) and affected the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was of very low safety significance due to the low fire initiating frequency and the availability of remaining mitigating systems. This finding did not have a cross-cutting aspect because the finding was not representative of current performance.

Inspection Report# : [2011012](#) (*pdf*)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72.

The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process. As a result, the NRC dispositions violations of 10 CFR 50.72 using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance.

The associated Performance Deficiency is tracked as item 2011-004-04.

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72. Finding.

The inspectors identified a finding associated with the Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process had an underlying performance deficiency. The underlying technical issue was evaluated using the SDP. In this case, the inspectors determined that the 2RY transformer locked out due to moisture entering a degraded bus duct, which was exposed to the environment. The licensee failed to identify the degraded bus duct earlier due to the inappropriate deferral of preventive maintenance activities. The inspectors determined that this issue was more than minor because it was associated with the protection against external factors attribute of the Initiating Events Cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Since the finding contributed to both the likelihood of a plant trip and that mitigating systems equipment or functions would not be available, a Region III Senior Reactor Analyst (SRA) was contacted for assistance. The results of the Phase 3 analysis showed a change in core damage frequency of $2.4E-8$ /year, which represented a finding of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel failed to follow procedures regarding the preventive maintenance deferral process (H.4(b)).

The associated Traditional Enforcement NCV is tracked as item 2011-004-03.
Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

UNIT 2 REACTOR TRIP DUE TO MIS-OPERATION OF SUBSTATION BREAKERS

A self-revealed finding of very low safety significance was identified by the inspectors due to personnel incorrectly implementing Procedure FP-G-DOC-03, "Procedure Use and Adherence." Specifically, maintenance personnel failed to adequately review, identify and correct potential problems associated with Procedure 5AWI 15.1.9, "Substation Work Control," to ensure that electrical substation (switchyard) high risk and/or critical activities conducted in November 2010 were appropriately observed. As a result, personnel failed to identify that a wire was not properly installed. The failure to install the wire led to the mis operation of multiple substation breakers, a turbine trip, and a Unit 2 reactor trip on May 9, 2011. The licensee initiated corrective action documents, Corrective Action Program (CAPs) 1284948 and 1284787, to document this event. Corrective actions for this issue included installing the wire and revising procedures to ensure that vulnerabilities associated with substation high risk/critical work activities were appropriately addressed. No violations of NRC requirements were identified due to substation components being non safety related.

The inspectors determined that the failure to correctly implement FP G DOC 03 was a performance deficiency that required a SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the protection from external factors attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, CAP area, because the licensee had not implemented and institutionalized operating experience associated with the performance of substation activities through changes to processes, procedures, equipment and training programs (P.2(b)).

Inspection Report# : [2011004](#) (pdf)

Significance:  Apr 15, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FLAMMABLE GAS CYLINDER STORED IN SAFETY-RELATED AREA.

An inspector-identified finding of very low safety significance and a non cited violation (NCV) of Technical Specification 5.4.1 was identified on February 8, 2011, due to the licensee's failure to establish, implement, and maintain procedures for the fire protection program. Specifically, the licensee failed to implement combustible control requirements prior to storing flammable material in a safety-related area. As a result, a gas cylinder containing flammable material was stored in the D6 emergency diesel generator radiator fan room for 1 week without the required additional fire loading evaluation completed. Corrective actions for this issue included entry of this issue into the corrective action program (CAP), removal of the cylinders from the radiator fan room, and the completion of both a human performance and a causal investigation.

The inspectors determined that this finding was more than minor because the presence of the gas cylinders could result in a fire affecting the ventilation system for the D6 emergency diesel generator. The finding was associated with the Initiating Events Cornerstone attribute of Protection against External Factors (Fire) and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using a Phase 2 SDP analysis, the inspectors calculated an upper bound change in CDF of 3.3×10^{-7} , which is consistent with a finding of very low safety significance. The inspectors determined that this finding was crosscutting in the Human Performance, Work Control area, because licensee personnel did not coordinate work activities consistent with nuclear safety, specifically in regard to the need to keep personnel apprised of the work impact and operational impact of the work activities. (H.3(b)).

Inspection Report# : [2011002](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Immediate Operability Determination on Molded Case Circuit Breakers

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, was identified by the inspectors due to the licensee's failure to complete an immediate operability determination as required by Procedure FP OP OL 01, "Operability/Functionality Determination." On October 27, 2011, the licensee identified that numerous molded case circuit breakers may not have received appropriate testing to demonstrate that the breakers would open to protect safety related equipment. Although a corrective action document was written, an immediate operability determination was not performed because the information in the document was viewed as programmatic in nature. Corrective actions for this event included performing the immediate operability determination and ensuring that operations personnel understood that operability determinations were required for programmatic concerns which questioned equipment operability.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to complete operability determinations could result in leaving inoperable plant equipment in service (a more significant safety concern). The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the Technical Specification (TS) allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross cutting in the Human Performance, Resources area because licensee personnel failed to follow procedures (H.4(b)).

Inspection Report# : [2011005](#) (*pdf*)

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Quality

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to submit a license amendment request (LAR) to correct the non-conservative Technical Specification (TS) surveillance requirements in Section 3.8.1 for the emergency diesel generators (EDGs) allowable steady state frequency. The issue was originally identified and entered into the licensee's corrective

action program on September 8, 2006. During this inspection, the licensee entered the finding into their corrective action program to evaluate how to resolve the issue.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee could not be assured that the design requirements for the EDGs' system loads would operate within the appropriate design specifications if the EDGs were allowed to operate within the non-conservative TS allowable steady state frequency of = 58.8 Hertz (Hz) and = 61.2 Hz. As a result, the licensee established an administrative limit to limit operation of the EDGs to a frequency between 59.5 Hz and 60.5 Hz. The finding was of very low safety significance because it did not result in a loss of operability. The finding had a cross-cutting aspect in the area of human performance, decision-making because the licensee repeatedly delayed submitting the license amendment until a resolution was developed by an industry working group.

Inspection Report# : [2011012](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

RADIATION MONITORS NOT FULLY SCOPED INTO OR ASSESSED BY THE MAINTENANCE RULE PROGRAM.

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50.65 due to the licensee's failure to demonstrate that the performance or condition of the Unit 1 and Unit 2 radiation monitors was effectively controlled through the performance of appropriate preventive maintenance. As a result, the licensee failed to establish goals or monitor the performance of these monitors in accordance with paragraphs (a)(1) and (a)(2) of 10 CFR 50.65. In addition, the licensee also failed to scope radiation monitors used in the emergency operating procedures into the maintenance rule as required by 10 CFR 50.65 (b)(2)(i). The licensee initiated corrective action documents, CAPs 1303302 and 1304984, for these issues. The licensee's corrective actions included reviewing radiation monitoring information to ensure that all applicable radiation monitors were included in and assessed by the maintenance rule program.

The inspectors determined that this issue was more than minor because actual radiation monitor failures had occurred to the extent that the performance or condition of the monitors was not being effectively controlled through the completion of maintenance. This finding was also 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 determined that this finding was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Table 4a, could be answered "No." This issue was determined to be cross cutting in the Human Performance, Decision Making area, because the licensee did not appropriately validate their underlying assumptions when determining which radiation monitors needed to be included in the maintenance rule (H.1(b)). (Section 1R12.1)

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CORRECTIVE ACTION ASSIGNMENTS CLOSED WITHOUT COMPLETION OF TASKS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," due to the licensee's failure to close corrective action assignments in accordance with procedural requirements. Specifically, the licensee closed several corrective action assignments associated with evaluating and modifying piping and pipe supports without ensuring that the assignments were completed or that justifications were provided for not completing the assignments. The licensee documented this

issue in corrective action documents, CAPs 1295772, 1296358 and 1297740. Corrective actions for this issue included evaluating why the procedural requirements were not followed and completing modifications for several feedwater system pipe supports.

The inspectors determined that the failure to ensure that corrective action assignments were closed in accordance with the procedural requirements provided in Procedure FP PA ARP 01, "CAP Action Request Process," was a performance deficiency that required an SDP evaluation. The inspectors determined that this finding was more than minor because, if left uncorrected, the failure to properly complete corrective action program assignments in accordance with procedural requirements could result in conditions adverse to quality remaining uncorrected. The inspectors determined that this finding was of very low safety significance because the finding was associated with a design deficiency that did not result in a loss of operability or functionality of the feedwater piping. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area, because the assignments were not closed properly due to a failure to follow the corrective action procedure (H.4(b)). (Section 40A2.4)

Inspection Report# : [2011004](#) (pdf)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. As a result, the NRC dispositions these violations using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. (Section 40A3.9)

The associated Performance Deficiency is tracked as item 2011-004-07

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in

actuators of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. The NRC evaluates the underlying technical issue using the SDP. In this case, the inspectors determined that the failure to operate the 11 containment and auxiliary building chiller in accordance with design could be assessed using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a. The inspectors concluded that the finding was of very low safety significance because each of the questions in Table 4a could be answered "No." Based on this, the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. No cross cutting aspect was assigned to this finding as the reason for operating the chiller outside of its design was not associated with any of the components/aspects provided in NRC IMC 0310, "Components within the Cross Cutting Areas." (Section 4OA3.9)

The associated traditional enforcement item is tracked as item 2011-004-06.

Inspection Report# : [2011004](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

EVALUATION OF EQUIPMENT STORED NEAR SAFETY-RELATED EQUIPMENT.

A finding of very low safety significance and a NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors on February 17, 2011, due to the licensee's failure to maintain quality records in accordance with established requirements. Specifically, Procedure FP-G-RM-01, "Quality Assurance Records," designated engineering evaluations as permanent quality records that were required to be retained for the life of the plant. However, licensee personnel were unable to produce several engineering evaluations which had been completed to evaluate the acceptability of scaffolding storage areas in safety-related areas within the auxiliary building. Corrective actions included performing an extent-of-condition review and reconstitution of the engineering evaluations. The issue was entered into the CAP as CAP 1272888.

The inspectors determined that this finding was more than minor because it was similar to IMC 0612, Appendix E, "Examples of Minor Issues," Example 1b, which stated that recordkeeping issues were more than minor if required records were irretrievably lost. In this case, the inspectors identified that several engineering evaluations associated with the storage of scaffolding near safety-related equipment were irretrievably lost and required reconstitution. Additionally, the inspectors determined the finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective, since the previously completed engineering evaluations were not available to show that the availability, reliability, and capability of equipment located in the scaffold storage areas was maintained. The inspectors evaluated the finding using the SDP and determined the finding was of very low safety significance because it did not result in a loss of system safety function; was not an actual loss of safety function for greater than the Technical Specification (TS) allowed outage time; and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting aspect was assigned to this finding as the missing engineering evaluations would have been completed more than 3 years ago and the failure to retain quality records was not reflective of current performance.

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 EVALUATIONS DID NOT ADEQUATELY VERIFY THE DESIGN FOR SUSCEPTIBLE LOCATIONS OF GAS ACCUMULATION IN PIPING SYSTEMS.

The inspectors 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 failure to adequately review the design of emergency core cooling, decay heat removal, and containment spray systems for gas susceptible locations. Specifically, the licensee's original design reviews in response to Generic Letter 2008 01 did not identify all gas susceptible locations (i.e., pipe

geometries that can accumulate gas). Corrective actions for this issue included the performance of ultrasonic examinations of most of the affected locations and did not find unacceptable void volumes. The licensee also evaluated the remaining locations for operability using alternative methods. There were no further operability concerns associated with these locations. The issue was entered into the CAP as CAP 1281658.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Mitigating Systems Cornerstone. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability. This finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not implement operating experience through training. Specifically, although relevant operating experience associated with gas susceptible locations was implemented in the procedures used to review the piping system design, the training provided did not adequately address the concepts portrayed by the operating experience contained in these procedures (P.2(b)). (Section 40A5.6.c(1))

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

ALTERNATE METHODS WERE NOT DEVELOPED FOR MONITORING INACCESSIBLE SUSCEPTIBLE LOCATIONS.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to follow Procedure H64, "Gas Accumulation Management Program." Specifically, the licensee failed to develop alternate methods to monitor the potential for void formation at inaccessible susceptible locations that required periodic monitoring. The licensee performed an alternative assessment that reasonably demonstrated that each inaccessible location was not affected by the presence of an adverse void. The licensee also planned to perform an apparent cause evaluation. The issue was entered into the CAP as CAP 1281682.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that this finding was cross-cutting in the area of human performance, work practices, because supervisory and management oversight did not ensure personnel adherence to the Procedure H64 requirement for the disposition of inaccessible locations (H.4(c)).

Inspection Report# : [2011003](#) (*pdf*)

Significance:  May 20, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT THE TRAIN A AND THAIN B DC ELECTRICAL POWER SUBSYSTEMS REMAINED OPERABLE IN MODES 1 THROUGH 4.

A Non-Cited Violation (NCV) of Technical Specification (TS) 3.8.4 was identified by the inspectors due to the licensee's failure to maintain the train A and train B direct current electrical power subsystems operable while operating the reactor in Modes 1 through 4. Specifically, the licensee installed safety related battery chargers which were susceptible to failure during certain design basis events. This issue was entered into the licensee's corrective action program (CAP) as CAP 1250561. Upon identifying this issue, the licensee performed an operability evaluation and determined that the battery chargers remained operable because procedures were in place to recover the battery chargers if a failure occurred. After further interaction with the NRC, the licensee concluded that a designated operator position needed to be established to ensure that a specific individual would perform the battery charger recovery actions prior to the safety related batteries being depleted. Long term corrective actions included replacing all four battery chargers.

This finding was determined to be more than minor because it was associated with the design control and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the

cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre-solved SDP worksheets for Prairie Island and determined that this finding screened as Red. A Phase 3 SDP evaluation was required to assess reasonable credit for recovery by operators. The results of the Phase 3 SDP evaluation showed that this finding was determined to be Green for Unit 2. No cross-cutting aspect was assigned to this finding because licensee decisions made in regards to evaluating the performance of the battery chargers were made many years ago and therefore, not reflective of current plant performance.

Inspection Report# : [2011011](#) (*pdf*)

Barrier Integrity

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

NO FULL FLOW TESTING OF PORV AIR SUPPLY CHECK VALVES.

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to assure that all testing required to demonstrate the check valves installed as part of a temporary modification for low temperature over pressure (LTOP) protection would perform satisfactory in service was identified and performed. Specifically, the licensee failed to verify the check valves would pass the necessary air flow to support the required number of valve strokes assumed in the LTOP analysis. The licensee performed a subsequent test and determined that the check valves would allow adequate air flow rate. The issue was entered into the CAP as CAP 1242980.

The inspectors determined this finding was more than minor because, if left uncorrected, the failure to demonstrate that the check valves would perform satisfactorily in service could result in installing an inadequately designed LTOP system each refueling outage. This finding impacted the Barrier Integrity Cornerstone. The inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," and determined that the issue screened out in Phase 1 and did not require a quantitative assessment, because the failure to perform the test did not result in a non-compliance with the LTOP TSs as listed in the various Attachment 1 checklists. Therefore, the finding was of very low safety significance, Green. The inspectors did not identify a cross-cutting aspect associated with this finding because decisions regarding the check valve testing were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUTE THE EFFECTS OF DYNAMIC LOADS AT THE CS DISCHARGE PIPING.

The inspectors 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 failure to evaluate the effects of dynamic loads at the containment spray discharge piping. Specifically, neither the structural design nor operation of the containment spray system addressed the dynamic loads that would result when the normally voided discharge piping rapidly fills up following system initiation. As a result of the inspectors concerns, the licensee performed an evaluation that showed that there was reasonable assurance that the system could tolerate the flow-induced dynamic loads following system initiation. The issue was entered into the CAP as CAP 1288035.

The performance deficiency was determined to be more than minor because it was associated with the structure, system, component and barrier performance attribute of the Barrier Integrity Cornerstone, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases

caused by accidents or events. The finding screened as very low safety significance using IMC 0609 Appendix H, "Containment Integrity Significance Determination Process," because it did not affect either core damage frequency or large early release frequency. The inspectors determined that this finding was cross-cutting in the area of problem identification and resolution because the licensee did not thoroughly evaluate external operating experience. Specifically, the licensee did not address the flow-induced dynamic loads at the containment spray discharge piping as it is rapidly filled up when evaluating the subject of gas accumulation/intrusion as requested by Generic Letter 2008-01 (P.2(a)).

Inspection Report# : [2011003](#) (pdf)

Significance: G Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PRESCRIBE APPROPRIATE PROCEDURE FOR IN-SERVICE TESTING OF CHECK VALVES.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to develop appropriate procedures when performing in-service testing of check valves 2SI-16-4 and 2SI-16-6. Specifically, the applicable procedures were not revised to account for a recent modification that altered the flow path used when testing these valves. As a result, the potential to mask unacceptable in-service testing results existed, which would cause an inoperable condition to go undetected. The licensee entered the applicable TS for the missed test. Since this in-service test could only be performed during outage conditions, the licensee performed the risk assessment required by the TSs. The assessment showed that the risk to the plant due to the missed test was small. The licensee planned to perform the missed in-service test during the next Unit 2 refueling outage. The issue was entered into the CAP as CAP 1286638.

The inspectors determined that this performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Barrier Integrity Cornerstone. This finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment. The finding had a cross-cutting aspect in the area of human performance, work control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the need for work groups to communicate and coordinate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2011003](#) (pdf)

Emergency Preparedness

Significance: SL-IV Apr 10, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INCOMPLETE AND INACCURATE EMERGENCY ACTION LEVEL CHANGE SUBMITTAL.

The NRC identified a Severity Level IV Non-Cited Violation of 10 CFR 50.9 for failing to provide complete and accurate information for prior approval of a new Emergency Action Level (EAL) scheme. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The submitted EAL scheme specified instrument threshold values for Alert classifications, EALs RA1.1 and RA1.2, which were beyond the indicated ranges of the effluent radiation monitors R 18, R-25, and R-31. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The violation potentially impedes or impacts the regulator process, it was dispositioned using the traditional enforcement process as described in NRC Inspection Manual Chapter 0612, Revision 04/30/10. Using Section 6.9 of the Enforcement Policy and after consultation with the Director of the Office of Enforcement, this issue was determined to be a Severity Level IV violation. Specifically, though the NRC would have questioned the issue with additional and correct information, the EAL ultimately would have been acceptable with an adjustment in the indicator range or EAL entry criteria value. In either case, it would not have resulted in substantial further inquiry. Additionally, the associated technical violation was determined to be of very low safety significance.

The associated performance deficiency is tracked as item 2011502-002.

Inspection Report# : [2011502](#) (*pdf*)

Significance:  Apr 07, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to identify that information provided to the NRC was Incomplete and Inaccurate regarding Emergency Action Level setpoints (1EP4.1.b)

The NRC identified a performance deficiency for the licensee's failure to identify that the EAL submittal sent to the NRC for Alert classification EALs RA1.1 and RA1.2 were beyond the range of the associated instruments, but the information was submitted to the NRC anyway. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The inspectors determined that the licensee's failure to provide complete and accurate information to the NRC, a violation of 10 CFR 50.9, was a performance deficiency and within the licensee's ability to foresee and prevent. The deficiency was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone attribute of Procedure Quality.

The associated Traditional Enforcement item is tracked as 2011502-001.

Inspection Report# : [2011502](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS THE IMPACT OF CHANGES IN THE PLANT'S ISOTOPIC PROFILE.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 20.1501.b due to the licensee's failure to evaluate the impact of changes in the isotopic profile (i.e., changes in the isotopic mix and percent abundance of specific radioisotopes) on the radiation monitoring instrumentation and the radiation assessment and measurement program. Corrective actions included performing an evaluation of the isotopic profile on the licensee's radiation monitoring instrumentation. No substantive adjustments to the program were necessary. The licensee also planned to revise applicable procedures to ensure that changes to the isotopic profile continued to be evaluated. The issue was entered into the CAP as CAP 1280900.

The inspectors determined that this finding was more than minor because, if left uncorrected, the performance deficiency would have led to a more significant safety concern. This finding was associated with the Occupational Radiation Safety Cornerstone. Additionally, this issue did not involve As-Low-As-Is Reasonably-Achievable planning or work controls; there was no overexposure or substantial potential for an overexposure to a worker; nor was the licensee's ability to assess dose compromised. Based on the information above, the inspectors concluded that the finding was of very low safety significance using IMC 0609, Appendix C, as guidance. The inspectors also reviewed the issue and no cross-cutting aspects were identified since decisions regarding the need to evaluate changes in the isotopic mix were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : March 02, 2012

Prairie Island 2

1Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

BREAKER 212E-44 FAILURE DUE TO LACK OF PREVENTIVE MAINTENANCE

A self revealed finding of very low safety significance and an NCV of Technical Specification (TS) 5.4.1 occurred on January 19, 2012, due to the safety related breaker for the 21 reactor vessel gap cooling fan failing while in service. Specifically, preventive maintenance activities used to ensure the breaker remained operable were not performed in a timely manner. Corrective actions for this issue included repairing/replacing the breaker for the 21 reactor vessel gap cooling fan and performing an extent of condition review to determine whether timely preventive maintenance was completed on similar breakers.

The inspectors determined that this issue was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability (such as having to perform a reactor shutdown). The inspectors determined that the finding was of very low safety significance since it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The cause of this finding was determined to be cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately coordinate work activities to support the continued operability and reliability of breaker 212E 44 (H.3 (b)).

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Flammable Gas Bottles Installed and/or Stored in the Auxiliary Building

The inspectors 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 III, "Design Control," for the licensee's failure to check the adequacy of design for flammable gas bottles installed in areas located within the auxiliary building and their impact on safety-related cables and equipment. Specifically, the licensee failed to evaluate how a failure of the flammable gas bottles and a resulting fire or explosion at the installed locations could impact nearby safety-related structures, systems, or components. The licensee entered this issue into their corrective action program to review the placement of the flammable gas bottles.

The inspectors determined that the finding was more than minor because the finding was associated with the Initiating Events cornerstone's attribute of Protection against External Factors (Fire) and affected the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was of very low safety significance due to the low fire initiating frequency and the availability of remaining mitigating systems. This finding did not have a cross-cutting aspect because the finding was not representative of current performance.

Inspection Report# : [2011012](#) (*pdf*)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72.

The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours.

Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process. As a result, the NRC dispositions violations of 10 CFR 50.72 using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance.

The associated Performance Deficiency is tracked as item 2011-004-04.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72. Finding.

The inspectors identified a finding associated with the Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process had an underlying performance deficiency. The underlying technical issue was evaluated using the SDP. In this case, the inspectors determined that the 2RY transformer locked out due to moisture entering a degraded bus duct, which was exposed to the environment. The licensee failed to identify the degraded bus duct earlier due to the inappropriate deferral of preventive maintenance activities. The inspectors determined that this issue was more than minor because it was associated with the protection against external factors attribute of the Initiating Events Cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Since the finding contributed to both the likelihood of a plant trip and that mitigating systems equipment or functions would not be available, a Region III Senior Reactor Analyst (SRA) was contacted for assistance. The results of the Phase 3 analysis showed a change in core damage frequency of 2.4E-8/year, which represented a finding of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel failed to follow procedures regarding the preventive maintenance deferral process (H.4(b)).

The associated Traditional Enforcement NCV is tracked as item 2011-004-03.

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

UNIT 2 REACTOR TRIP DUE TO MIS-OPERATION OF SUBSTATION BREAKERS

A self-revealed finding of very low safety significance was identified by the inspectors due to personnel incorrectly

implementing Procedure FP-G-DOC-03, "Procedure Use and Adherence." Specifically, maintenance personnel failed to adequately review, identify and correct potential problems associated with Procedure 5AWI 15.1.9, "Substation Work Control," to ensure that electrical substation (switchyard) high risk and/or critical activities conducted in November 2010 were appropriately observed. As a result, personnel failed to identify that a wire was not properly installed. The failure to install the wire led to the mis operation of multiple substation breakers, a turbine trip, and a Unit 2 reactor trip on May 9, 2011. The licensee initiated corrective action documents, Corrective Action Program (CAPs) 1284948 and 1284787, to document this event. Corrective actions for this issue included installing the wire and revising procedures to ensure that vulnerabilities associated with substation high risk/critical work activities were appropriately addressed. No violations of NRC requirements were identified due to substation components being non safety related.

The inspectors determined that the failure to correctly implement FP G DOC 03 was a performance deficiency that required a SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the protection from external factors attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, CAP area, because the licensee had not implemented and institutionalized operating experience associated with the performance of substation activities through changes to processes, procedures, equipment and training programs (P.2(b)).

Inspection Report# : [2011004](#) (pdf)

Significance:  Apr 15, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FLAMMABLE GAS CYLINDER STORED IN SAFETY-RELATED AREA.

An inspector-identified finding of very low safety significance and a non cited violation (NCV) of Technical Specification 5.4.1 was identified on February 8, 2011, due to the licensee's failure to establish, implement, and maintain procedures for the fire protection program. Specifically, the licensee failed to implement combustible control requirements prior to storing flammable material in a safety-related area. As a result, a gas cylinder containing flammable material was stored in the D6 emergency diesel generator radiator fan room for 1 week without the required additional fire loading evaluation completed. Corrective actions for this issue included entry of this issue into the corrective action program (CAP), removal of the cylinders from the radiator fan room, and the completion of both a human performance and a causal investigation.

The inspectors determined that this finding was more than minor because the presence of the gas cylinders could result in a fire affecting the ventilation system for the D6 emergency diesel generator. The finding was associated with the Initiating Events Cornerstone attribute of Protection against External Factors (Fire) and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using a Phase 2 SDP analysis, the inspectors calculated an upper bound change in CDF of 3.3×10^{-7} , which is consistent with a finding of very low safety significance. The inspectors determined that this finding was crosscutting in the Human Performance, Work Control area, because licensee personnel did not coordinate work activities consistent with nuclear safety, specifically in regard to the need to keep personnel apprised of the work impact and operational impact of the work activities. (H.3(b)).

Inspection Report# : [2011002](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS OPERABILITY OF CIRCUIT BREAKERS DUE TO INADEQUATE LUBRICATION

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on January 19, 2012, due to the licensee's failure to properly assess information contained in the Corrective Action Program (CAP) document 1322404 as required by Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the CAP contained information that a safety related breaker failed to operate due to a lack of lubrication. However, an extent of condition assessment was not included in CAP 1322404 nor was an operability recommendation assigned to evaluate the potential impact on similar equipment. Corrective actions included performing an extent of condition review and ensuring that other safety related equipment remained operable.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess equipment operability could result in inappropriately leaving plant equipment in service (a more significant safety concern). The inspectors determined that this finding was of very low safety significance because each of the questions listed under the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4A could be answered "no." This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions when making decisions regarding the continued operability of the breakers discussed above (H.1(b)).

Inspection Report# : [2012002](#) (pdf)

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Immediate Operability Determination on Molded Case Circuit Breakers

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, was identified by the inspectors due to the licensee's failure to complete an immediate operability determination as required by Procedure FP OP OL 01, "Operability/Functionality Determination." On October 27, 2011, the licensee identified that numerous molded case circuit breakers may not have received appropriate testing to demonstrate that the breakers would open to protect safety related equipment. Although a corrective action document was written, an immediate operability determination was not performed because the information in the document was viewed as programmatic in nature. Corrective actions for this event included performing the immediate operability determination and ensuring that operations personnel understood that operability determinations were required for programmatic concerns which questioned equipment operability.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to complete operability determinations could result in leaving inoperable plant equipment in service (a more significant safety concern). The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the Technical Specification (TS) allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross cutting in the Human Performance, Resources area because licensee personnel failed to follow procedures (H.4(b)).

Inspection Report# : [2011005](#) (pdf)

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Quality

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to submit a license amendment request (LAR) to correct the non-conservative Technical Specification (TS) surveillance requirements in Section 3.8.1 for the emergency diesel generators (EDGs) allowable steady state frequency. The issue was originally identified and entered into the licensee's corrective

action program on September 8, 2006. During this inspection, the licensee entered the finding into their corrective action program to evaluate how to resolve the issue.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of

ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee could not be assured that the design requirements for the EDGs' system loads would operate within the appropriate design specifications if the EDGs were allowed to operate within the non-conservative TS allowable steady state frequency of = 58.8 Hertz (Hz) and = 61.2 Hz. As a result, the licensee established an administrative limit to limit operation of the EDGs to a frequency between 59.5 Hz and 60.5 Hz. The finding was of very low safety significance because it did not result in a loss of operability. The finding had a cross-cutting aspect in the area of human performance, decision-making because the licensee repeatedly delayed submitting the license amendment until a resolution was developed by an industry working group.

Inspection Report# : [2011012](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

RADIATION MONITORS NOT FULLY SCOPED INTO OR ASSESSED BY THE MAINTENANCE RULE PROGRAM.

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50.65 due to the licensee's failure to demonstrate that the performance or condition of the Unit 1 and Unit 2 radiation monitors was effectively controlled through the performance of appropriate preventive maintenance. As a result, the licensee failed to establish goals or monitor the performance of these monitors in accordance with paragraphs (a)(1) and (a)(2) of 10 CFR 50.65. In addition, the licensee also failed to scope radiation monitors used in the emergency operating procedures into the maintenance rule as required by 10 CFR 50.65 (b)(2)(i). The licensee initiated corrective action documents, CAPs 1303302 and 1304984, for these issues. The licensee's corrective actions included reviewing radiation monitoring information to ensure that all applicable radiation monitors were included in and assessed by the maintenance rule program.

The inspectors determined that this issue was more than minor because actual radiation monitor failures had occurred to the extent that the performance or condition of the monitors was not being effectively controlled through the completion of maintenance. This finding was also 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 determined that this finding was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Table 4a, could be answered "No." This issue was determined to be cross cutting in the Human Performance, Decision Making area, because the licensee did not appropriately validate their underlying assumptions when determining which radiation monitors needed to be included in the maintenance rule (H.1(b)). (Section 1R12.1)

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CORRECTIVE ACTION ASSIGNMENTS CLOSED WITHOUT COMPLETION OF TASKS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," due to the licensee's failure to close corrective action assignments in accordance with procedural requirements. Specifically, the licensee closed several corrective action assignments associated with evaluating and modifying piping and pipe supports without ensuring that the assignments were completed or that justifications were provided for not completing the assignments. The licensee documented this issue in corrective action documents, CAPs 1295772, 1296358 and 1297740. Corrective actions for this issue included evaluating why the procedural requirements were not followed and completing modifications for several feedwater system pipe supports.

The inspectors determined that the failure to ensure that corrective action assignments were closed in accordance with the procedural requirements provided in Procedure FP PA ARP 01, "CAP Action Request Process," was a performance deficiency that required an SDP evaluation. The inspectors determined that this finding was more than minor because, if left uncorrected, the failure to properly complete corrective action program assignments in accordance with procedural requirements could result in conditions adverse to quality remaining uncorrected. The inspectors determined that this finding was of very low safety significance because the finding was associated with a

design deficiency that did not result in a loss of operability or functionality of the feedwater piping. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area, because the assignments were not closed properly due to a failure to follow the corrective action procedure (H.4(b)). (Section 40A2.4)

Inspection Report# : [2011004](#) (pdf)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. As a result, the NRC dispositions these violations using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. (Section 40A3.9)

The associated Performance Deficiency is tracked as item 2011-004-07

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. The NRC evaluates the underlying technical issue using the SDP. In this case, the inspectors determined that the failure to operate the 11 containment and auxiliary building chiller in accordance with design could be assessed using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a. The inspectors concluded that the finding was of very low safety significance because each of the questions in Table 4a could be answered "No." Based on this, the

underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. No cross cutting aspect was assigned to this finding as the reason for operating the chiller outside of its design was not associated with any of the components/aspects provided in NRC IMC 0310, "Components within the Cross Cutting Areas." (Section 4OA3.9)

The associated traditional enforcement item is tracked as item 2011-004-06.

Inspection Report# : [2011004](#) (pdf)

Significance: **G** Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

EVALUATION OF EQUIPMENT STORED NEAR SAFETY-RELATED EQUIPMENT.

A finding of very low safety significance and a NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors on February 17, 2011, due to the licensee's failure to maintain quality records in accordance with established requirements. Specifically, Procedure FP-G-RM-01, "Quality Assurance Records," designated engineering evaluations as permanent quality records that were required to be retained for the life of the plant. However, licensee personnel were unable to produce several engineering evaluations which had been completed to evaluate the acceptability of scaffolding storage areas in safety-related areas within the auxiliary building. Corrective actions included performing an extent-of-condition review and reconstitution of the engineering evaluations. The issue was entered into the CAP as CAP 1272888.

The inspectors determined that this finding was more than minor because it was similar to IMC 0612, Appendix E, "Examples of Minor Issues," Example 1b, which stated that recordkeeping issues were more than minor if required records were irretrievably lost. In this case, the inspectors identified that several engineering evaluations associated with the storage of scaffolding near safety-related equipment were irretrievably lost and required reconstitution. Additionally, the inspectors determined the finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective, since the previously completed engineering evaluations were not available to show that the availability, reliability, and capability of equipment located in the scaffold storage areas was maintained. The inspectors evaluated the finding using the SDP and determined the finding was of very low safety significance because it did not result in a loss of system safety function; was not an actual loss of safety function for greater than the Technical Specification (TS) allowed outage time; and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting aspect was assigned to this finding as the missing engineering evaluations would have been completed more than 3 years ago and the failure to retain quality records was not reflective of current performance.

Inspection Report# : [2011003](#) (pdf)

Significance: **G** Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

GL 2008-01 EVALUATIONS DID NOT ADEQUATELY VERIFY THE DESIGN FOR SUSCEPTIBLE LOCATIONS OF GAS ACCUMULATION IN PIPING SYSTEMS.

The inspectors 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 failure to adequately review the design of emergency core cooling, decay heat removal, and containment spray systems for gas susceptible locations. Specifically, the licensee's original design reviews in response to Generic Letter 2008 01 did not identify all gas susceptible locations (i.e., pipe geometries that can accumulate gas). Corrective actions for this issue included the performance of ultrasonic examinations of most of the affected locations and did not find unacceptable void volumes. The licensee also evaluated the remaining locations for operability using alternative methods. There were no further operability concerns associated with these locations. The issue was entered into the CAP as CAP 1281658.

The performance deficiency was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Mitigating Systems Cornerstone. The finding screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability. This finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not implement operating experience through training.

Specifically, although relevant operating experience associated with gas susceptible locations was implemented in the procedures used to review the piping system design, the training provided did not adequately address the concepts portrayed by the operating experience contained in these procedures (P.2(b)). (Section 40A5.6.c(1))

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

ALTERNATE METHODS WERE NOT DEVELOPED FOR MONITORING INACCESSIBLE SUSCEPTIBLE LOCATIONS.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to follow Procedure H64, "Gas Accumulation Management Program." Specifically, the licensee failed to develop alternate methods to monitor the potential for void formation at inaccessible susceptible locations that required periodic monitoring. The licensee performed an alternative assessment that reasonably demonstrated that each inaccessible location was not affected by the presence of an adverse void. The licensee also planned to perform an apparent cause evaluation. The issue was entered into the CAP as CAP 1281682.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that this finding was cross-cutting in the area of human performance, work practices, because supervisory and management oversight did not ensure personnel adherence to the Procedure H64 requirement for the disposition of inaccessible locations (H.4(c)).
Inspection Report# : [2011003](#) (*pdf*)

Significance:  May 20, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE THAT THE TRAIN A AND THAIN B DC ELECTRICAL POWER SUBSYSTEMS REMAINED OPERABLE IN MODES 1 THROUGH 4.

A Non-Cited Violation (NCV) of Technical Specification (TS) 3.8.4 was identified by the inspectors due to the licensee's failure to maintain the train A and train B direct current electrical power subsystems operable while operating the reactor in Modes 1 through 4. Specifically, the licensee installed safety related battery chargers which were susceptible to failure during certain design basis events. This issue was entered into the licensee's corrective action program (CAP) as CAP 1250561. Upon identifying this issue, the licensee performed an operability evaluation and determined that the battery chargers remained operable because procedures were in place to recover the battery chargers if a failure occurred. After further interaction with the NRC, the licensee concluded that a designated operator position needed to be established to ensure that a specific individual would perform the battery charger recovery actions prior to the safety related batteries being depleted. Long term corrective actions included replacing all four battery chargers.

This finding was determined to be more than minor because it was associated with the design control and equipment performance attributes of the Mitigating Systems Cornerstone. In addition, this performance deficiency impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation and determined that a Phase 2 evaluation was required because this finding represented an actual loss of safety function of a single train of equipment for greater than the TS allowed outage time. The inspectors performed a Phase 2 evaluation using the pre solved SDP worksheets for Prairie Island and determined that this finding screened as Red. A Phase 3 SDP evaluation was required to assess reasonable credit for recovery by operators. The results of the Phase 3 SDP evaluation showed that this finding was determined to be Green for Unit 2. No cross cutting aspect was assigned to this finding because licensee decisions made in regards to evaluating the performance of the battery chargers were made many years ago and therefore, not reflective of current plant performance.

Barrier Integrity

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

NO FULL FLOW TESTING OF PORV AIR SUPPLY CHECK VALVES.

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” was identified by the inspectors for the failure to assure that all testing required to demonstrate the check valves installed as part of a temporary modification for low temperature over pressure (LTOP) protection would perform satisfactory in service was identified and performed. Specifically, the licensee failed to verify the check valves would pass the necessary air flow to support the required number of valve strokes assumed in the LTOP analysis. The licensee performed a subsequent test and determined that the check valves would allow adequate air flow rate. The issue was entered into the CAP as CAP 1242980.

The inspectors determined this finding was more than minor because, if left uncorrected, the failure to demonstrate that the check valves would perform satisfactorily in service could result in installing an inadequately designed LTOP system each refueling outage. This finding impacted the Barrier Integrity Cornerstone. The inspectors used IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” and determined that the issue screened out in Phase 1 and did not require a quantitative assessment, because the failure to perform the test did not result in a non-compliance with the LTOP TSs as listed in the various Attachment 1 checklists. Therefore, the finding was of very low safety significance, Green. The inspectors did not identify a cross-cutting aspect associated with this finding because decisions regarding the check valve testing were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO EVALUTE THE EFFECTS OF DYNAMIC LOADS AT THE CS DISCHARGE PIPING.

The inspectors 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 failure to evaluate the effects of dynamic loads at the containment spray discharge piping. Specifically, neither the structural design nor operation of the containment spray system addressed the dynamic loads that would result when the normally voided discharge piping rapidly fills up following system initiation. As a result of the inspectors concerns, the licensee performed an evaluation that showed that there was reasonable assurance that the system could tolerate the flow-induced dynamic loads following system initiation. The issue was entered into the CAP as CAP 1288035.

The performance deficiency was determined to be more than minor because it was associated with the structure, system, component and barrier performance attribute of the Barrier Integrity Cornerstone, and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding screened as very low safety significance using IMC 0609 Appendix H, “Containment Integrity Significance Determination Process,” because it did not affect either core damage frequency or large early release frequency. The inspectors determined that this finding was cross-cutting in the area of problem identification and resolution because the licensee did not thoroughly evaluate external operating experience. Specifically, the licensee did not address the flow-induced dynamic loads at the containment spray discharge piping as it is rapidly filled up when evaluating the subject of gas accumulation/intrusion as requested by Generic Letter 2008-01 (P.2(a)).

Inspection Report# : [2011003](#) (pdf)

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PRESCRIBE APPROPRIATE PROCEDURE FOR IN-SERVICE TESTING OF CHECK VALVES.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to develop appropriate procedures when performing in-service testing of check valves 2SI-16-4 and 2SI-16-6. Specifically, the applicable procedures were not revised to account for a recent modification that altered the flow path used when testing these valves. As a result, the potential to mask unacceptable in-service testing results existed, which would cause an inoperable condition to go undetected. The licensee entered the applicable TS for the missed test. Since this in-service test could only be performed during outage conditions, the licensee performed the risk assessment required by the TSs. The assessment showed that the risk to the plant due to the missed test was small. The licensee planned to perform the missed in-service test during the next Unit 2 refueling outage. The issue was entered into the CAP as CAP 1286638.

The inspectors determined that this performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The finding is associated with the Barrier Integrity Cornerstone. This finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment. The finding had a cross-cutting aspect in the area of human performance, work control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the need for work groups to communicate and coordinate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance (H.3(b)).

Inspection Report# : [2011003](#) (*pdf*)

Emergency Preparedness

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY AUGMENT ON-SHIFT STAFF

A self-revealed finding of very low safety significance and an NCV of 10 CFR 50.54(q) was identified on January 7, 2012, due to the licensee's failure to follow and maintain their emergency plan in effect. The inspectors identified that the licensee's Emergency Response Organization failed to provide adequate staffing for initial facility accident response through the timely augmentation of on shift staffing as required by 10 CFR 50.47(b)(2). Specifically, four Radiological Protection positions and one Radiological Emergency Coordinator position were not staffed within the 30 minute commitment of Table 1, "Guidance for Augmentation of Plant Emergency Organization," in the Prairie Island Emergency Plan. As an interim corrective action, individuals were placed on shift to ensure that emergency response positions were filled within the required times.

The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone. This finding also affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP." Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to communicate the basis for decisions to personnel who have a need to know the information in order to perform work safely and in a timely manner (H.1(c)).

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY ACTIVATE ERDS

A self revealed finding of very low safety significance and an NCV of 10 CFR 50.72(a)(4) was identified on January 7, 2012, due to the licensee's failure to activate the Emergency Response Data System (ERDS) within one hour of an Alert declaration. Specifically, the ERDS was not made operable until 80 minutes after the Alert declaration due to task priority and equipment issues related to a system upgrade. Corrective actions for this issue included emphasizing the timely activation of ERDS with emergency responders and repairing the system upgrade equipment issues. The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP," that considers a failure to activate ERDS as a failure to implement. Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the CAP component of the Problem Identification and Resolution cross cutting area because the licensee failed to take appropriate corrective actions to address a previously identified ERDS activation issue in a timely manner (P.1(d)).

Inspection Report# : [2012002](#) (*pdf*)

Significance: SL-IV Apr 10, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

INCOMPLETE AND INACCURATE EMERGENCY ACTION LEVEL CHANGE SUBMITTAL.

The NRC identified a Severity Level IV Non-Cited Violation of 10 CFR 50.9 for failing to provide complete and accurate information for prior approval of a new Emergency Action Level (EAL) scheme. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The submitted EAL scheme specified instrument threshold values for Alert classifications, EALs RA1.1 and RA1.2, which were beyond the indicated ranges of the effluent radiation monitors R 18, R-25, and R-31. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The violation potentially impedes or impacts the regulator process, it was dispositioned using the traditional enforcement process as described in NRC Inspection Manual Chapter 0612, Revision 04/30/10. Using Section 6.9 of the Enforcement Policy and after consultation with the Director of the Office of Enforcement, this issue was determined to be a Severity Level IV violation. Specifically, though the NRC would have questioned the issue with additional and correct information, the EAL ultimately would have been acceptable with an adjustment in the indicator range or EAL entry criteria value. In either case, it would not have resulted in substantial further inquiry. Additionally, the associated technical violation was determined to be of very low safety significance.

The associated performance deficiency is tracked as item 2011502-002.

Inspection Report# : [2011502](#) (*pdf*)

Significance:  Apr 07, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to identify that information provided to the NRC was Incomplete and Inaccurate regarding Emergency Action Level setpoints (1EP4.1.b)

The NRC identified a performance deficiency for the licensee's failure to identify that the EAL submittal sent to the NRC for Alert classification EALs RA1.1 and RA1.2 were beyond the range of the associated instruments, but the information was submitted to the NRC anyway. The licensee's submittal to the NRC, entitled, "Revision to Emergency Action Levels," dated October 22, 2004, was not complete and accurate in all material respects. The NRC accepted and approved the proposed EALs not realizing the information was incomplete and inaccurate.

The inspectors determined that the licensee's failure to provide complete and accurate information to the NRC, a violation of 10 CFR 50.9, was a performance deficiency and within the licensee's ability to foresee and prevent. The deficiency was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone attribute of Procedure Quality.

The associated Traditional Enforcement item is tracked as 2011502-001.
Inspection Report# : [2011502](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS THE IMPACT OF CHANGES IN THE PLANT'S ISOTOPIC PROFILE.

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 20.1501.b due to the licensee's failure to evaluate the impact of changes in the isotopic profile (i.e., changes in the isotopic mix and percent abundance of specific radioisotopes) on the radiation monitoring instrumentation and the radiation assessment and measurement program. Corrective actions included performing an evaluation of the isotopic profile on the licensee's radiation monitoring instrumentation. No substantive adjustments to the program were necessary. The licensee also planned to revise applicable procedures to ensure that changes to the isotopic profile continued to be evaluated. The issue was entered into the CAP as CAP 1280900.

The inspectors determined that this finding was more than minor because, if left uncorrected, the performance deficiency would have led to a more significant safety concern. This finding was associated with the Occupational Radiation Safety Cornerstone. Additionally, this issue did not involve As-Low-As-Is Reasonably-Achievable planning or work controls; there was no overexposure or substantial potential for an overexposure to a worker; nor was the licensee's ability to assess dose compromised. Based on the information above, the inspectors concluded that the finding was of very low safety significance using IMC 0609, Appendix C, as guidance. The inspectors also reviewed the issue and no cross-cutting aspects were identified since decisions regarding the need to evaluate changes in the isotopic mix were made several years ago and were not reflective of current performance.

Inspection Report# : [2011003](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : May 29, 2012

Prairie Island 2

2Q/2012 Plant Inspection Findings

Initiating Events

Significance: **G** Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

UNIT 2 REACTOR TRIP DUE TO OPERATION OF LOW PRESSURE TURBINE OUTSIDE ITS DESIGN.

A self-revealed finding of very low safety significance and a non cited violation (NCV) of Technical Specification (TS) 5.4.1 occurred on February 21, 2012 due the licensee's failure to establish, implement and maintain procedures regarding power operations. Specifically, procedure 2C1.4 contained information regarding the operation of the moisture separator reheater control valves that conflicted with Westinghouse Vendor Technical Manual (VTM) XH-2-164-1, "572 MW Steam Turbine Operation and Control Manual." This conflict caused a feedwater heater high level condition during Unit 2 low power operations which resulted in a manual reactor trip. The licensee initiated corrective action document 1325986 to document the trip. Corrective actions for this issue included revising procedure 2C1.4 to eliminate the conflicting information.

The inspectors determined that the failure to establish, implement and maintain procedures for power operation as required by TS 5.4.1 was a performance deficiency that required an SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the procedure quality attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program (CAP) area, because the licensee's resolution of a previous Unit 1 trip, due to the same cause, identified the differences in operation between the VTM and the operating procedures. However, the procedures were not revised and no evaluation was performed to determine why operating outside the designer's recommendation was acceptable (P.1(c)).

Inspection Report# : [2012003](#) (*pdf*)

Significance: **G** Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

BREAKER 212E-44 FAILURE DUE TO LACK OF PREVENTIVE MAINTENANCE

A self revealed finding of very low safety significance and an NCV of Technical Specification (TS) 5.4.1 occurred on January 19, 2012, due to the safety related breaker for the 21 reactor vessel gap cooling fan failing while in service. Specifically, preventive maintenance activities used to ensure the breaker remained operable were not performed in a timely manner. Corrective actions for this issue included repairing/replacing the breaker for the 21 reactor vessel gap cooling fan and performing an extent of condition review to determine whether timely preventive maintenance was completed on similar breakers.

The inspectors determined that this issue was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability (such as having to perform a reactor shutdown). The inspectors determined that the finding was of very low safety significance since it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The cause of this finding was determined to be cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately coordinate work activities to support the continued operability and reliability of breaker 212E 44 (H.3 (b)).

Inspection Report# : [2012002](#) (*pdf*)

G**Significance:** Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Flammable Gas Bottles Installed and/or Stored in the Auxiliary Building

The inspectors 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 III, "Design Control," for the licensee's failure to check the adequacy of design for flammable gas bottles installed in areas located within the auxiliary building and their impact on safety-related cables and equipment. Specifically, the licensee failed to evaluate how a failure of the flammable gas bottles and a resulting fire or explosion at the installed locations could impact nearby safety-related structures, systems, or components. The licensee entered this issue into their corrective action program to review the placement of the flammable gas bottles.

The inspectors determined that the finding was more than minor because the finding was associated with the Initiating Events cornerstone's attribute of Protection against External Factors (Fire) and affected the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was of very low safety significance due to the low fire initiating frequency and the availability of remaining mitigating systems. This finding did not have a cross-cutting aspect because the finding was not representative of current performance.

Inspection Report# : [2011012](#) (pdf)**Significance:** SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72.

The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours.

Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process. As a result, the NRC dispositions violations of 10 CFR 50.72 using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance.

The associated Performance Deficiency is tracked as item 2011-004-04.

Inspection Report# : [2011004](#) (pdf)**G****Significance:** Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO MAKE EIGHT HOUR REPORT PURSUANT TO 10 CFR 50.72. Finding.

The inspectors identified a finding associated with the Severity Level IV NCV of 10 CFR 50.72(b)(3)(v)(D) for the licensee's failure to report an event or condition that could have prevented the fulfillment of a safety function to the NRC within 8 hours. Specifically, on June 27, 2011, an unexpected lockout of the 2RY transformer rendered one of two required offsite power paths inoperable. A subsequent review of the remaining transmission system capabilities resulted in declaring the second offsite power path inoperable due to inadequate minimum post trip voltage. However, the licensee failed to recognize that the inoperability of both offsite power paths constituted a loss of safety function that was reportable to the NRC within 8 hours. The licensee initiated a corrective action document, CAP 1292940, for

this issue. Corrective actions for this issue included reporting this issue to the NRC on July 1, 2011, revising procedures to ensure that inoperable offsite power paths that remain available were reported to the NRC, and repairing the 2RY transformer.

The inspectors determined that the failure to report required plant events or conditions to the NRC had the potential to impede or impact the regulatory process had an underlying performance deficiency. The underlying technical issue was evaluated using the SDP. In this case, the inspectors determined that the 2RY transformer locked out due to moisture entering a degraded bus duct, which was exposed to the environment. The licensee failed to identify the degraded bus duct earlier due to the inappropriate deferral of preventive maintenance activities. The inspectors determined that this issue was more than minor because it was associated with the protection against external factors attribute of the Initiating Events Cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Since the finding contributed to both the likelihood of a plant trip and that mitigating systems equipment or functions would not be available, a Region III Senior Reactor Analyst (SRA) was contacted for assistance. The results of the Phase 3 analysis showed a change in core damage frequency of $2.4E-8$ /year, which represented a finding of very low safety significance (Green). The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area because licensee personnel failed to follow procedures regarding the preventive maintenance deferral process (H.4(b)).

The associated Traditional Enforcement NCV is tracked as item 2011-004-03.
Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

UNIT 2 REACTOR TRIP DUE TO MIS-OPERATION OF SUBSTATION BREAKERS

A self-revealed finding of very low safety significance was identified by the inspectors due to personnel incorrectly implementing Procedure FP-G-DOC-03, "Procedure Use and Adherence." Specifically, maintenance personnel failed to adequately review, identify and correct potential problems associated with Procedure 5AWI 15.1.9, "Substation Work Control," to ensure that electrical substation (switchyard) high risk and/or critical activities conducted in November 2010 were appropriately observed. As a result, personnel failed to identify that a wire was not properly installed. The failure to install the wire led to the mis operation of multiple substation breakers, a turbine trip, and a Unit 2 reactor trip on May 9, 2011. The licensee initiated corrective action documents, Corrective Action Program (CAPs) 1284948 and 1284787, to document this event. Corrective actions for this issue included installing the wire and revising procedures to ensure that vulnerabilities associated with substation high risk/critical work activities were appropriately addressed. No violations of NRC requirements were identified due to substation components being non safety related.

The inspectors determined that the failure to correctly implement FP G DOC 03 was a performance deficiency that required a SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the protection from external factors attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, CAP area, because the licensee had not implemented and institutionalized operating experience associated with the performance of substation activities through changes to processes, procedures, equipment and training programs (P.2(b)).

Inspection Report# : [2011004](#) (pdf)

G**Significance:** Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK

A finding of very low safety significance and a non-cited violation (NCV) of 10CFR 50.65(a)(4) was identified by the inspectors due to the licensee's failure to properly assess plant risk upon obtaining information which challenged the continued availability of the 21 Residual Heat Removal (RHR) pump. On April 21, 2012, licensee personnel failed to promptly recognize the unplanned orange risk condition when the 21 RHR Pump vibrations exceeded the inservice test (IST) criteria of procedure SP 2092B, "Safety Injection Check Valve Test (Head Off) Part B: RWST to RHR Flow Path Verification." Corrective actions for this event included raising the reactor cavity level 20 feet above the reactor vessel flange per TS requirements.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess and manage risk could result in a loss of shutdown cooling (a more significant safety concern) due to a loss of the RHR function. Since Unit 2 was shut down in Mode 6, the Senior Risk Analyst (SRA) assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The SRAs reviewed Attachment 1, "Phase 1 Operational Checklists for Both PWRs and BWRs." The applicable checklist was Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' OR RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." The risk result was calculated to be $3.3E-7$. Since the total estimated change in core damage frequency was greater than $1.0E-7$ /yr, the potential risk contribution for this finding from large early release frequency was screened using the guidance of IMC 0609, Appendix H, "Containment Integrity Significance Determination Process." The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the TS allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross-cutting in the Human Performance, Work Control area since the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2012003](#) (pdf)**G****Significance:** Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS OPERABILITY OF CIRCUIT BREAKERS DUE TO INADEQUATE LUBRICATION

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on January 19, 2012, due to the licensee's failure to properly assess information contained in the Corrective Action Program (CAP) document 1322404 as required by Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the CAP contained information that a safety related breaker failed to operate due to a lack of lubrication. However, an extent of condition assessment was not included in CAP 1322404 nor was an operability recommendation assigned to evaluate the potential impact on similar equipment. Corrective actions included performing an extent of condition review and ensuring that other safety related equipment remained operable.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess equipment operability could result in inappropriately leaving plant equipment in service (a more significant safety concern). The inspectors determined that this finding was of very low safety significance because each of the questions listed under the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4A could be answered "no." This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions when making decisions regarding the continued operability of the breakers discussed above (H.1(b)).

Inspection Report# : [2012002](#) (pdf)

G**Significance:** Mar 31, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IMPLEMENT PROCEDURE USE AND ADHERENCE REQUIREMENTS WHILE DRAINING SODIUM HYPOCHLORITE DRAW DOWN TANK

A finding of very low safety significance was self revealed on January 7, 2012, due to chemistry personnel failing to comply with requirements contained in Procedure FP G DOC 03, "Procedure Use and Adherence," prior to draining the sodium hypochlorite draw down tank. Specifically, personnel failed to identify that the procedure used during the draining activity was inadequate. The use of an inadequate procedure led to a pipe break, the release of sodium hypochlorite into a bermed area, and an Alert classification under the licensee's emergency plan. No violations of NRC requirements were identified for this issue since the sodium hypochlorite system was non safety related. Corrective actions for this issue included reviewing chemistry procedure adequacy and increasing supervisory oversight of chemistry activities.

The inspectors determined that this issue was more than minor because it was a precursor to a significant event. Specifically, the licensee declared an ALERT emergency action level due to the sodium hypochlorite spill. The inspectors concluded that the finding was of very low safety significance since all of the questions located in the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4a were answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities such that nuclear safety was supported (H.4(c)).

Inspection Report# : [2012002](#) (pdf)**G****Significance:** Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Immediate Operability Determination on Molded Case Circuit Breakers

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, was identified by the inspectors due to the licensee's failure to complete an immediate operability determination as required by Procedure FP OP OL 01, "Operability/Functionality Determination." On October 27, 2011, the licensee identified that numerous molded case circuit breakers may not have received appropriate testing to demonstrate that the breakers would open to protect safety related equipment. Although a corrective action document was written, an immediate operability determination was not performed because the information in the document was viewed as programmatic in nature. Corrective actions for this event included performing the immediate operability determination and ensuring that operations personnel understood that operability determinations were required for programmatic concerns which questioned equipment operability.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to complete operability determinations could result in leaving inoperable plant equipment in service (a more significant safety concern). The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the Technical Specification (TS) allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross cutting in the Human Performance, Resources area because licensee personnel failed to follow procedures (H.4(b)).

Inspection Report# : [2011005](#) (pdf)**G****Significance:** Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Quality

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to submit a license amendment request (LAR) to correct the non-conservative Technical Specification (TS) surveillance requirements in Section 3.8.1 for the emergency diesel generators (EDGs)

allowable steady state frequency. The issue was originally identified and entered into the licensee's corrective

action program on September 8, 2006. During this inspection, the licensee entered the finding into their corrective action program to evaluate how to resolve the issue.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee could not be assured that the design requirements for the EDGs' system loads would operate within the appropriate design specifications if the EDGs were allowed to operate within the non-conservative TS allowable steady state frequency of = 58.8 Hertz (Hz) and = 61.2 Hz. As a result, the licensee established an administrative limit to limit operation of the EDGs to a frequency between 59.5 Hz and 60.5 Hz. The finding was of very low safety significance because it did not result in a loss of operability. The finding had a cross-cutting aspect in the area of human performance, decision-making because the licensee repeatedly delayed submitting the license amendment until a resolution was developed by an industry working group.

Inspection Report# : [2011012](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

RADIATION MONITORS NOT FULLY SCOPED INTO OR ASSESSED BY THE MAINTENANCE RULE PROGRAM.

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50.65 due to the licensee's failure to demonstrate that the performance or condition of the Unit 1 and Unit 2 radiation monitors was effectively controlled through the performance of appropriate preventive maintenance. As a result, the licensee failed to establish goals or monitor the performance of these monitors in accordance with paragraphs (a)(1) and (a)(2) of 10 CFR 50.65. In addition, the licensee also failed to scope radiation monitors used in the emergency operating procedures into the maintenance rule as required by 10 CFR 50.65 (b)(2)(i). The licensee initiated corrective action documents, CAPs 1303302 and 1304984, for these issues. The licensee's corrective actions included reviewing radiation monitoring information to ensure that all applicable radiation monitors were included in and assessed by the maintenance rule program.

The inspectors determined that this issue was more than minor because actual radiation monitor failures had occurred to the extent that the performance or condition of the monitors was not being effectively controlled through the completion of maintenance. This finding was also 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 determined that this finding was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Table 4a, could be answered "No." This issue was determined to be cross cutting in the Human Performance, Decision Making area, because the licensee did not appropriately validate their underlying assumptions when determining which radiation monitors needed to be included in the maintenance rule (H.1(b)). (Section 1R12.1)

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

CORRECTIVE ACTION ASSIGNMENTS CLOSED WITHOUT COMPLETION OF TASKS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," due to the licensee's failure to close corrective action assignments in accordance with procedural requirements. Specifically, the licensee closed several corrective action assignments associated with evaluating and modifying piping and pipe supports without ensuring that the assignments were completed or that justifications were provided for not completing the assignments. The licensee documented this issue in corrective action documents, CAPs 1295772, 1296358 and 1297740. Corrective actions for this issue included evaluating why the procedural requirements were not followed and completing modifications for several feedwater system pipe supports.

The inspectors determined that the failure to ensure that corrective action assignments were closed in accordance with the procedural requirements provided in Procedure FP PA ARP 01, "CAP Action Request Process," was a performance deficiency that required an SDP evaluation. The inspectors determined that this finding was more than minor because, if left uncorrected, the failure to properly complete corrective action program assignments in accordance with procedural requirements could result in conditions adverse to quality remaining uncorrected. The inspectors determined that this finding was of very low safety significance because the finding was associated with a design deficiency that did not result in a loss of operability or functionality of the feedwater piping. The inspectors concluded that this finding was cross cutting in the Human Performance, Work Practices area, because the assignments were not closed properly due to a failure to follow the corrective action procedure (H.4(b)). (Section 4OA2.4)

Inspection Report# : [2011004](#) (pdf)

Significance: SL-IV Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. As a result, the NRC dispositions these violations using the traditional enforcement process instead of the SDP. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. (Section 4OA3.9)

The associated Performance Deficiency is tracked as item 2011-004-07

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN A LICENSEE EVENT REPORT

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 due to the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, Licensee Event Report (LER) 05000282/2011-001-00; 05000306/2011-001-00, stated that the unplanned actuation of the 121 motor driven cooling water pump (MDCLP) was caused by the over tightening of a gasketed connection on the 11 containment and auxiliary building chiller. The results of a subsequent apparent cause evaluation showed that the unplanned actuation of the 121 MDCLP was due to operating the chiller in a manner outside of its design. The licensee initiated corrective action document, CAP 1299410, to document this issue. Corrective actions for this issue included submitting a revised LER to the NRC and evaluating actions that could be taken to ensure that future chiller operation would not result in actuations of the cooling water pump.

The inspectors determined that this violation was more than minor because the inaccurate information could impede or impact the regulatory process. Specifically, in order for the NRC to determine the acceptability of the licensee's corrective actions as part of the LER review, the licensee was required to provide complete and accurate information regarding the cause of the event. The NRC evaluates the underlying technical issue using the SDP. In this case, the inspectors determined that the failure to operate the 11 containment and auxiliary building chiller in accordance with design could be assessed using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Tables 3b and 4a. The inspectors concluded that the finding was of very low safety significance because each of the questions in Table 4a could be answered "No." Based on this, the underlying technical issue was evaluated by the SDP and determined to be of very low safety significance. No cross cutting aspect was assigned to this finding as the reason for operating the chiller outside of its design was not associated with any of the components/aspects provided in NRC IMC 0310, "Components within the Cross Cutting Areas." (Section 40A3.9)

The associated traditional enforcement item is tracked as item 2011-004-06.
Inspection Report# : [2011004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY AUGMENT ON-SHIFT STAFF

A self-revealed finding of very low safety significance and an NCV of 10 CFR 50.54(q) was identified on January 7, 2012, due to the licensee's failure to follow and maintain their emergency plan in effect. The inspectors identified that the licensee's Emergency Response Organization failed to provide adequate staffing for initial facility accident response through the timely augmentation of on shift staffing as required by 10 CFR 50.47(b)(2). Specifically, four Radiological Protection positions and one Radiological Emergency Coordinator position were not staffed within the 30 minute commitment of Table 1, "Guidance for Augmentation of Plant Emergency Organization," in the Prairie Island Emergency Plan. As an interim corrective action, individuals were placed on shift to ensure that emergency response positions were filled within the required times.

The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone. This finding also affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP." Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to communicate the basis for decisions to personnel who have a need to know the information in order to perform work safely and in a timely manner (H.1(c)).
Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY ACTIVATE ERDS

A self revealed finding of very low safety significance and an NCV of 10 CFR 50.72(a)(4) was identified on January 7, 2012, due to the licensee's failure to activate the Emergency Response Data System (ERDS) within one hour of an

Alert declaration. Specifically, the ERDS was not made operable until 80 minutes after the Alert declaration due to task priority and equipment issues related to a system upgrade. Corrective actions for this issue included emphasizing the timely activation of ERDS with emergency responders and repairing the system upgrade equipment issues. The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP," that considers a failure to activate ERDS as a failure to implement. Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the CAP component of the Problem Identification and Resolution cross cutting area because the licensee failed to take appropriate corrective actions to address a previously identified ERDS activation issue in a timely manner (P.1(d)).

Inspection Report# : [2012002](#) (*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 12, 2012

Prairie Island 2

3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

UNIT 2 REACTOR TRIP DUE TO OPERATION OF LOW PRESSURE TURBINE OUTSIDE ITS DESIGN.

A self-revealed finding of very low safety significance and a non cited violation (NCV) of Technical Specification (TS) 5.4.1 occurred on February 21, 2012 due the licensee's failure to establish, implement and maintain procedures regarding power operations. Specifically, procedure 2C1.4 contained information regarding the operation of the moisture separator reheater control valves that conflicted with Westinghouse Vendor Technical Manual (VTM) XH-2-164-1, "572 MW Steam Turbine Operation and Control Manual." This conflict caused a feedwater heater high level condition during Unit 2 low power operations which resulted in a manual reactor trip. The licensee initiated corrective action document 1325986 to document the trip. Corrective actions for this issue included revising procedure 2C1.4 to eliminate the conflicting information.

The inspectors determined that the failure to establish, implement and maintain procedures for power operation as required by TS 5.4.1 was a performance deficiency that required an SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the procedure quality attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program (CAP) area, because the licensee's resolution of a previous Unit 1 trip, due to the same cause, identified the differences in operation between the VTM and the operating procedures. However, the procedures were not revised and no evaluation was performed to determine why operating outside the designer's recommendation was acceptable (P.1(c)).

Inspection Report# : [2012003](#) (*pdf*)

Significance: G Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

BREAKER 212E-44 FAILURE DUE TO LACK OF PREVENTIVE MAINTENANCE

A self revealed finding of very low safety significance and an NCV of Technical Specification (TS) 5.4.1 occurred on January 19, 2012, due to the safety related breaker for the 21 reactor vessel gap cooling fan failing while in service. Specifically, preventive maintenance activities used to ensure the breaker remained operable were not performed in a timely manner. Corrective actions for this issue included repairing/replacing the breaker for the 21 reactor vessel gap cooling fan and performing an extent of condition review to determine whether timely preventive maintenance was completed on similar breakers.

The inspectors determined that this issue was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability (such as having to perform a reactor shutdown). The inspectors determined that the finding was of very low safety significance since it did not contribute to both the likelihood of a

reactor trip and the likelihood that mitigation equipment or functions would not be available. The cause of this finding was determined to be cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately coordinate work activities to support the continued operability and reliability of breaker 212E 44 (H.3 (b)).

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Flammable Gas Bottles Installed and/or Stored in the Auxiliary Building

The inspectors 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 III, "Design Control," for the licensee's failure to check the adequacy of design for flammable gas bottles installed in areas located within the auxiliary building and their impact on safety-related cables and equipment. Specifically, the licensee failed to evaluate how a failure of the flammable gas bottles and a resulting fire or explosion at the installed locations could impact nearby safety-related structures, systems, or components. The licensee entered this issue into their corrective action program to review the placement of the flammable gas bottles.

The inspectors determined that the finding was more than minor because the finding was associated with the Initiating Events cornerstone's attribute of Protection against External Factors (Fire) and affected the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was of very low safety significance due to the low fire initiating frequency and the availability of remaining mitigating systems. This finding did not have a cross-cutting aspect because the finding was not representative of current performance.

Inspection Report# : [2011012](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM ADEQUATE PAST OPERABILITY EVALUATIONS AFTER DISCOVERING DEGRADED COMPONENT COOLING HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately verify the adequacy of the design of systems needed during a Design Basis Accident (DBA). Specifically, the licensee failed to verify that the degradation identified during as-found inspections on the 21 and 22 Component Cooling (CC) Water Heat Exchangers would not have prevented the heat exchangers (HXs) from performing their safety functions if a DBA had occurred. The licensee entered this issue into their corrective action program as CAPs 1348544 and 1349624. The licensee concluded by additional analysis, and engineering judgment, that the Heat Exchangers had remained operable. The licensee was also considering flushing the heat exchangers more frequently; inspecting and cleaning the HXs more frequently; modifying the CC heat exchangers to provide a more effective flush; and changing plant documents and/or programs to require opening, inspecting, and cleaning of the HXs following major dredging near the plant intake. This issue was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and impacted the objective of ensuring the capability of systems that respond to initiating

events to prevent undesirable consequences. The as-found condition of the HXs challenged the capability of the CC system to fulfill its safety function; however, the licensee did not fully evaluate the condition. The finding was of very low safety significance because the design deficiency did not result in a loss of operability or functionality. The inspectors determined the finding was cross-cutting in the Human Performance, Work Control, Work Practices area because the licensee did not properly ensure that supervisory and management oversight of work activities, including contractors, supported nuclear safety (H.4(c)). Specifically, licensee personnel reviewing and approving Engineering Changes (ECs) 20044 and 20222 did not require the preparer to provide adequate technical support as part of the past operability evaluation discussed in the ECs.

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK

A finding of very low safety significance and a non-cited violation (NCV) of 10CFR 50.65(a)(4) was identified by the inspectors due to the licensee's failure to properly assess plant risk upon obtaining information which challenged the continued availability of the 21 Residual Heat Removal (RHR) pump. On April 21, 2012, licensee personnel failed to promptly recognize the unplanned orange risk condition when the 21 RHR Pump vibrations exceeded the inservice test (IST) criteria of procedure SP 2092B, "Safety Injection Check Valve Test (Head Off) Part B: RWST to RHR Flow Path Verification." Corrective actions for this event included raising the reactor cavity level 20 feet above the reactor vessel flange per TS requirements.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess and manage risk could result in a loss of shutdown cooling (a more significant safety concern) due to a loss of the RHR function. Since Unit 2 was shut down in Mode 6, the Senior Risk Analyst (SRA) assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The SRAs reviewed Attachment 1, "Phase 1 Operational Checklists for Both PWRS and BWRS." The applicable checklist was Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' OR RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." The risk result was calculated to be $3.3E-7$. Since the total estimated change in core damage frequency was greater than $1.0E-7$ /yr, the potential risk contribution for this finding from large early release frequency was screened using the guidance of IMC 0609, Appendix H, "Containment Integrity Significance Determination Process." The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the TS allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross-cutting in the Human Performance, Work Control area since the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2012003](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO TAKE CORRECTIVE ACTION FOR REACTOR COOLANT SYSTEM LEVEL INDICATION ISSUES.

An inspector-identified finding of very low safety significance was identified due to the failure to take corrective action for a Condition Adverse to Quality. The inspectors determined that the failure to correct for the loss of reactor coolant system (RCS) level indication during the 2010 refueling outage was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as the loss of RCS level indication during draining,

may result in level decreasing to the point where the function of the safety-related residual heat removal system may be affected. These level indication issues recurred during the RCS draining on March 6, 2012, resulting in a Notice of Unusual Event (NOUE) being declared. The licensee initiated Action Request (AR) 1329470 to evaluate this issue. This finding was determined to be crosscutting in the Problem Identification and Resolution, area because the licensee had not taken appropriate corrective actions to address the RCS level indication issues (P.1 (d)). This finding was not considered a violation, as the affected RCS level indicators were not considered safety-related.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE FOR DRAINING OF REACTOR COOLANT SYSTEM.

An inspector-identified finding of very low safety significance and a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, was identified due to the licensee's use of an inadequate procedure during draining of the RCS. The inspectors determined that the procedure used during the March 6, 2012, draining of the reactor coolant to the vessel flange level, did not contain adequate guidance for identifying and compensating for inadequate reactor vessel level indication due to over pressurization of the reactor vessel. This was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as inaccurate RCS level indication resulted in plant operators declaring an NOUE and overdraining the RCS to the point where the function of the safety-related residual heat removal system was potentially affected. The licensee initiated Action Request (AR) 1329465 to evaluate this issue.

This finding was determined to be crosscutting in the Resources area, because the licensee has not maintained complete, up-to-date procedures for performing RCS draining (H.2(c)). The licensee had prior instances where RCS level indication was lost due to vessel overpressure; however, the licensee decided not to revise the procedures based on an incorrect assumption that the procedures contained adequate guidance.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO UPDATE THE CALCULATIONS FOR STEAM GENERATOR DRAINING.

An inspector-identified finding of very low safety significance and an NCV of 10 CFR 50, Appendix B, Criterion III, was identified due to the licensee's failure to update engineering calculations for the amount of nitrogen to be used during steam generator tube draining. Specifically, the failure to correctly include the number of plugged steam generator tubes into the engineering calculations was considered a performance deficiency. This deficiency was more than minor, as it contributed to the vessel overpressure that resulted in overdraining of the RCS on March 6 2012, and a NOUE. The licensee initiated ARs 01328420, 01329464, and 01328366 to evaluate this issue.

This finding was determined to be cross-cutting in the area of Resources, specifically having complete and up-to-date design documentation (H.2.(c)). Because the licensee inappropriately placed the engineering calculations in "non-active" status, they were not updated to reflect the actual number of plugged steam generator tubes. This resulted in the station procedure incorrectly stating the amount of nitrogen needed and the amount of water removed during steam generator tube draining.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS OPERABILITY OF CIRCUIT BREAKERS DUE TO INADEQUATE LUBRICATION

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on January 19, 2012, due to the licensee's failure to properly assess information contained in the Corrective Action Program (CAP) document 1322404 as required by Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the CAP contained information that a safety related breaker failed to operate due to a lack of lubrication. However, an extent of condition assessment was not included in CAP 1322404 nor was an operability recommendation assigned to evaluate the potential impact on similar equipment. Corrective actions included performing an extent of condition review and ensuring that other safety related equipment remained operable.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess equipment operability could result in inappropriately leaving plant equipment in service (a more significant safety concern). The inspectors determined that this finding was of very low safety significance because each of the questions listed under the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4A could be answered "no." This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions when making decisions regarding the continued operability of the breakers discussed above (H.1(b)).

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IMPLEMENT PROCEDURE USE AND ADHERENCE REQUIREMENTS WHILE DRAINING SODIUM HYPOCHLORITE DRAW DOWN TANK

A finding of very low safety significance was self revealed on January 7, 2012, due to chemistry personnel failing to comply with requirements contained in Procedure FP G DOC 03, "Procedure Use and Adherence," prior to draining the sodium hypochlorite draw down tank. Specifically, personnel failed to identify that the procedure used during the draining activity was inadequate. The use of an inadequate procedure led to a pipe break, the release of sodium hypochlorite into a bermed area, and an Alert classification under the licensee's emergency plan. No violations of NRC requirements were identified for this issue since the sodium hypochlorite system was non safety related. Corrective actions for this issue included reviewing chemistry procedure adequacy and increasing supervisory oversight of chemistry activities.

The inspectors determined that this issue was more than minor because it was a precursor to a significant event. Specifically, the licensee declared an ALERT emergency action level due to the sodium hypochlorite spill. The inspectors concluded that the finding was of very low safety significance since all of the questions located in the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4a were answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities such that nuclear safety was supported (H.4(c)).

Inspection Report# : [2012002](#) (pdf)

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Complete Immediate Operability Determination on Molded Case Circuit Breakers

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, was

identified by the inspectors due to the licensee's failure to complete an immediate operability determination as required by Procedure FP OP OL 01, "Operability/Functionality Determination." On October 27, 2011, the licensee identified that numerous molded case circuit breakers may not have received appropriate testing to demonstrate that the breakers would open to protect safety related equipment. Although a corrective action document was written, an immediate operability determination was not performed because the information in the document was viewed as programmatic in nature. Corrective actions for this event included performing the immediate operability determination and ensuring that operations personnel understood that operability determinations were required for programmatic concerns which questioned equipment operability.

The inspectors determined that this issue was more than minor because if left uncorrected, the failure to complete operability determinations could result in leaving inoperable plant equipment in service (a more significant safety concern). The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the Technical Specification (TS) allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross cutting in the Human Performance, Resources area because licensee personnel failed to follow procedures (H.4(b)).

Inspection Report# : [2011005](#) (*pdf*)

Significance:  Nov 18, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Quality

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to submit a license amendment request (LAR) to correct the non-conservative Technical Specification (TS) surveillance requirements in Section 3.8.1 for the emergency diesel generators (EDGs) allowable steady state frequency. The issue was originally identified and entered into the licensee's corrective

action program on September 8, 2006. During this inspection, the licensee entered the finding into their corrective action program to evaluate how to resolve the issue.

The inspectors determined that the finding was more than minor because the finding was associated with the Mitigating Systems cornerstone's attribute of Equipment Performance and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee could not be assured that the design requirements for the EDGs' system loads would operate within the appropriate design specifications if the EDGs were allowed to operate within the non-conservative TS allowable steady state frequency of = 58.8 Hertz (Hz) and = 61.2 Hz. As a result, the licensee established an administrative limit to limit operation of the EDGs to a frequency between 59.5 Hz and 60.5 Hz. The finding was of very low safety significance because it did not result in a loss of operability. The finding had a cross-cutting aspect in the area of human performance, decision-making because the licensee repeatedly delayed submitting the license amendment until a resolution was developed by an industry working group.

Inspection Report# : [2011012](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance: G Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY AUGMENT ON-SHIFT STAFF

A self-revealed finding of very low safety significance and an NCV of 10 CFR 50.54(q) was identified on January 7, 2012, due to the licensee's failure to follow and maintain their emergency plan in effect. The inspectors identified that the licensee's Emergency Response Organization failed to provide adequate staffing for initial facility accident response through the timely augmentation of on shift staffing as required by 10 CFR 50.47(b)(2). Specifically, four Radiological Protection positions and one Radiological Emergency Coordinator position were not staffed within the 30 minute commitment of Table 1, "Guidance for Augmentation of Plant Emergency Organization," in the Prairie Island Emergency Plan. As an interim corrective action, individuals were placed on shift to ensure that emergency response positions were filled within the required times.

The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone. This finding also affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP." Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to communicate the basis for decisions to personnel who have a need to know the information in order to perform work safely and in a timely manner (H.1(c)).

Inspection Report# : [2012002](#) (*pdf*)

Significance: G Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY ACTIVATE ERDS

A self revealed finding of very low safety significance and an NCV of 10 CFR 50.72(a)(4) was identified on January 7, 2012, due to the licensee's failure to activate the Emergency Response Data System (ERDS) within one hour of an Alert declaration. Specifically, the ERDS was not made operable until 80 minutes after the Alert declaration due to task priority and equipment issues related to a system upgrade. Corrective actions for this issue included emphasizing the timely activation of ERDS with emergency responders and repairing the system upgrade equipment issues.

The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP," that considers a failure to activate ERDS as a failure to implement. Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the CAP component of the Problem Identification and Resolution cross cutting area because the licensee failed to take appropriate corrective actions to address a previously identified ERDS activation issue in a timely manner (P.1(d)).

Inspection Report# : [2012002](#) (*pdf*)

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 : November 30, 2012

Prairie Island 2

4Q/2012 Plant Inspection Findings

Initiating Events

Significance:  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*)

Significance:  Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

UNIT 2 REACTOR TRIP DUE TO OPERATION OF LOW PRESSURE TURBINE OUTSIDE ITS DESIGN.

A self-revealed finding of very low safety significance and a non cited violation (NCV) of Technical Specification (TS) 5.4.1 occurred on February 21, 2012 due the licensee's failure to establish, implement and maintain procedures regarding power operations. Specifically, procedure 2C1.4 contained information regarding the operation of the moisture separator reheater control valves that conflicted with Westinghouse Vendor Technical Manual (VTM) XH-2-164-1, "572 MW Steam Turbine Operation and Control Manual." This conflict caused a feedwater heater high level condition during Unit 2 low power operations which resulted in a manual reactor trip. The licensee initiated corrective action document 1325986 to document the trip. Corrective actions for this issue included revising procedure 2C1.4 to eliminate the conflicting information.

The inspectors determined that the failure to establish, implement and maintain procedures for power operation as required by TS 5.4.1 was a performance deficiency that required an SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the procedure quality attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program (CAP) area, because the licensee's resolution of a previous Unit 1 trip, due to the same cause, identified the differences in operation between the VTM and the operating procedures. However, the procedures were not revised and no evaluation was performed to determine why operating outside the designer's recommendation was acceptable (P.1(c)).

Inspection Report# : [2012003](#) (pdf)

Significance:  Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

BREAKER 212E-44 FAILURE DUE TO LACK OF PREVENTIVE MAINTENANCE

A self revealed finding of very low safety significance and an NCV of Technical Specification (TS) 5.4.1 occurred on January 19, 2012, due to the safety related breaker for the 21 reactor vessel gap cooling fan failing while in service. Specifically, preventive maintenance activities used to ensure the breaker remained operable were not performed in a timely manner. Corrective actions for this issue included repairing/replacing the breaker for the 21 reactor vessel gap cooling fan and performing an extent of condition review to determine whether timely preventive maintenance was completed on similar breakers.

The inspectors determined that this issue was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability (such as having to perform a reactor shutdown). The inspectors determined that the finding was of very low safety significance since it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The cause of this finding was determined to be cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately coordinate work activities to support the continued operability and reliability of breaker 212E 44 (H.3 (b)).

Inspection Report# : [2012002](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO REPLACE RUBBER HOSES ON D5 AND D6 IN ACCORDANCE WITH VENDOR RECOMMENDATION.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement vendor recommendations to replace rubber hoses on the emergency diesel generators (EDGs) at a 10-year frequency. Specifically, some of the installed rubber hoses were found to be in service beyond the vendor recommended service life and if they were to degrade, could impact the safety-related functions of the EDGs. Corrective actions for this issue evaluating the condition and replacing the hoses on specific diesel engines.

The inspectors determined that this issue was more than minor because if left uncorrected, it could become a more significant safety concern because the rubber hoses could continue to degrade until operation of the diesel engines were impacted. The finding 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." Due to the age of this issue, the cause of the finding was not reflective of current performance and therefore, a cross cutting aspect was not assigned.

Inspection Report# : [2012005](#) (pdf)

Significance:  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 PERFORMANCE 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)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM ADEQUATE PAST OPERABILITY EVALUATIONS AFTER DISCOVERING DEGRADED COMPONENT COOLING HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately verify the adequacy of the design of systems needed during a Design Basis Accident (DBA). Specifically, the licensee failed to verify that the degradation identified during as-found inspections on the 21 and 22 Component Cooling (CC) Water Heat Exchangers would not have prevented the heat exchangers (HXs) from performing their safety functions if a DBA had occurred. The licensee entered this issue into their corrective action program as CAPs 1348544 and 1349624. The licensee concluded by additional analysis, and engineering judgment, that the Heat Exchangers had remained operable. The licensee was also considering flushing the heat exchangers more frequently; inspecting and cleaning the HXs more frequently; modifying the CC heat exchangers to provide a more effective flush; and changing plant documents and/or programs to require opening, inspecting, and cleaning of the HXs following major dredging near the plant intake. This issue was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and impacted the objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The as-found condition of the HXs challenged the capability of the CC system to fulfill its safety function; however, the licensee did not fully evaluate the condition. The finding was of very low safety significance because the design deficiency did not result in a loss of operability or functionality. The inspectors determined the finding was cross-cutting in the Human Performance, Work Control, Work Practices area because the licensee did not properly ensure that supervisory and management oversight of work activities, including contractors, supported nuclear safety (H.4(c)). Specifically, licensee personnel reviewing and approving Engineering Changes (ECs) 20044 and 20222 did not require the preparer to provide adequate technical support as part of the past operability evaluation discussed in the ECs.

Inspection Report# : [2012004](#) (pdf)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK

A finding of very low safety significance and a non-cited violation (NCV) of 10CFR 50.65(a)(4) was identified by the inspectors due to the licensee's failure to properly assess plant risk upon obtaining information which challenged the continued availability of the 21 Residual Heat Removal (RHR) pump. On April 21, 2012, licensee personnel failed to

promptly recognize the unplanned orange risk condition when the 21 RHR Pump vibrations exceeded the inservice test (IST) criteria of procedure SP 2092B, "Safety Injection Check Valve Test (Head Off) Part B: RWST to RHR Flow Path Verification." Corrective actions for this event included raising the reactor cavity level 20 feet above the reactor vessel flange per TS requirements.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess and manage risk could result in a loss of shutdown cooling (a more significant safety concern) due to a loss of the RHR function. Since Unit 2 was shut down in Mode 6, the Senior Risk Analyst (SRA) assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The SRAs reviewed Attachment 1, "Phase 1 Operational Checklists for Both PWRS and BWRS." The applicable checklist was Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' OR RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." The risk result was calculated to be $3.3E-7$. Since the total estimated change in core damage frequency was greater than $1.0E-7$ /yr, the potential risk contribution for this finding from large early release frequency was screened using the guidance of IMC 0609, Appendix H, "Containment Integrity Significance Determination Process." The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the TS allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross-cutting in the Human Performance, Work Control area since the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2012003](#) (pdf)

Significance:  May 30, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO TAKE CORRECTIVE ACTION FOR REACTOR COOLANT SYSTEM LEVEL INDICATION ISSUES.

An inspector-identified finding of very low safety significance was identified due to the failure to take corrective action for a Condition Adverse to Quality. The inspectors determined that the failure to correct for the loss of reactor coolant system (RCS) level indication during the 2010 refueling outage was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as the loss of RCS level indication during draining, may result in level decreasing to the point where the function of the safety-related residual heat removal system may be affected. These level indication issues recurred during the RCS draining on March 6, 2012, resulting in a Notice of Unusual Event (NOUE) being declared. The licensee initiated Action Request (AR) 1329470 to evaluate this issue. This finding was determined to be crosscutting in the Problem Identification and Resolution, area because the licensee had not taken appropriate corrective actions to address the RCS level indication issues (P.1 (d)). This finding was not considered a violation, as the affected RCS level indicators were not considered safety-related.

Inspection Report# : [2012011](#) (pdf)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE FOR DRAINING OF REACTOR COOLANT SYSTEM.

An inspector-identified finding of very low safety significance and a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, was identified due to the licensee's use of an inadequate procedure during draining of the RCS. The inspectors determined that the procedure used during the March 6, 2012, draining of the reactor coolant to the vessel flange level, did not contain adequate guidance for identifying and compensating for inadequate reactor vessel level indication due to over pressurization of the reactor vessel. This was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as inaccurate RCS level indication resulted in plant operators declaring an NOUE and overdraining the RCS to the point where the function of the safety-related residual heat removal system was potentially affected. The licensee initiated Action Request (AR) 1329465 to evaluate this issue.

This finding was determined to be crosscutting in the Resources area, because the licensee has not maintained complete, up-to-date procedures for performing RCS draining (H.2(c)). The licensee had prior instances where RCS level indication was lost due to vessel overpressure; however, the licensee decided not to revise the procedures based on an incorrect assumption that the procedures contained adequate guidance.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO UPDATE THE CALCULATIONS FOR STEAM GENERATOR DRAINING.

An inspector-identified finding of very low safety significance and an NCV of 10 CFR 50, Appendix B, Criterion III, was identified due to the licensee's failure to update engineering calculations for the amount of nitrogen to be used during steam generator tube draining. Specifically, the failure to correctly include the number of plugged steam generator tubes into the engineering calculations was considered a performance deficiency. This deficiency was more than minor, as it contributed to the vessel overpressure that resulted in overdraining of the RCS on March 6 2012, and a NOUE. The licensee initiated ARs 01328420, 01329464, and 01328366 to evaluate this issue.

This finding was determined to be cross-cutting in the area of Resources, specifically having complete and up-to-date design documentation (H.2.(c)). Because the licensee inappropriately placed the engineering calculations in "non-active" status, they were not updated to reflect the actual number of plugged steam generator tubes. This resulted in the station procedure incorrectly stating the amount of nitrogen needed and the amount of water removed during steam generator tube draining.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ASSESS OPERABILITY OF CIRCUIT BREAKERS DUE TO INADEQUATE LUBRICATION

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, on January 19, 2012, due to the licensee's failure to properly assess information contained in the Corrective Action Program (CAP) document 1322404 as required by Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the CAP contained information that a safety related breaker failed to operate due to a lack of lubrication. However, an extent of condition assessment was not included in CAP 1322404 nor was an operability recommendation assigned to evaluate the potential impact on similar equipment. Corrective actions included performing an extent of condition review and ensuring that other safety related equipment remained operable.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess equipment operability could result in inappropriately leaving plant equipment in service (a more significant safety concern). The inspectors determined that this finding was of very low safety significance because each of the questions listed under the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4A could be answered "no." This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions when making decisions regarding the continued operability of the breakers discussed above (H.1(b)).

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO IMPLEMENT PROCEDURE USE AND ADHERENCE REQUIREMENTS WHILE DRAINING SODIUM HYPOCHLORITE DRAW DOWN TANK

A finding of very low safety significance was self revealed on January 7, 2012, due to chemistry personnel failing to comply with requirements contained in Procedure FP G DOC 03, "Procedure Use and Adherence," prior to draining the sodium hypochlorite draw down tank. Specifically, personnel failed to identify that the procedure used during the draining activity was inadequate. The use of an inadequate procedure led to a pipe break, the release of sodium hypochlorite into a bermed area, and an Alert classification under the licensee's emergency plan. No violations of NRC requirements were identified for this issue since the sodium hypochlorite system was non safety related. Corrective actions for this issue included reviewing chemistry procedure adequacy and increasing supervisory oversight of chemistry activities.

The inspectors determined that this issue was more than minor because it was a precursor to a significant event. Specifically, the licensee declared an ALERT emergency action level due to the sodium hypochlorite spill. The inspectors concluded that the finding was of very low safety significance since all of the questions located in the Mitigating Systems Cornerstone column of IMC 0609.04, Table 4a were answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to ensure supervisory and management oversight of work activities such that nuclear safety was supported (H.4(c)).

Inspection Report# : [2012002](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY AUGMENT ON-SHIFT STAFF

A self-revealed finding of very low safety significance and an NCV of 10 CFR 50.54(q) was identified on January 7, 2012, due to the licensee's failure to follow and maintain their emergency plan in effect. The inspectors identified that the licensee's Emergency Response Organization failed to provide adequate staffing for initial facility accident response through the timely augmentation of on shift staffing as required by 10 CFR 50.47(b)(2). Specifically, four Radiological Protection positions and one Radiological Emergency Coordinator position were not staffed within the 30 minute commitment of Table 1, "Guidance for Augmentation of Plant Emergency Organization," in the Prairie Island Emergency Plan. As an interim corrective action, individuals were placed on shift to ensure that emergency response positions were filled within the required times.

The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone. This finding also affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP." Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the Human Performance, Decision Making area because the licensee failed to communicate the basis for decisions to personnel who have a need to know the information in order to perform work safely and in a timely manner (H.1(c)).

Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TIMELY ACTIVATE ERDS

A self revealed finding of very low safety significance and an NCV of 10 CFR 50.72(a)(4) was identified on January

7, 2012, due to the licensee's failure to activate the Emergency Response Data System (ERDS) within one hour of an Alert declaration. Specifically, the ERDS was not made operable until 80 minutes after the Alert declaration due to task priority and equipment issues related to a system upgrade. Corrective actions for this issue included emphasizing the timely activation of ERDS with emergency responders and repairing the system upgrade equipment issues. The inspectors determined this performance deficiency was more than minor because it was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness SDP," that considers a failure to activate ERDS as a failure to implement. Using the Actual Event Implementation Problem Sheet 2, the inspectors determined the finding to be of very low safety significance because it was not a failure to implement a risk significant planning standard. This finding was determined to be cross cutting in the CAP component of the Problem Identification and Resolution cross cutting area because the licensee failed to take appropriate corrective actions to address a previously identified ERDS activation issue in a timely manner (P.1(d)).

Inspection Report# : [2012002](#) (*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 : February 28, 2013

Prairie Island 2

1Q/2013 Plant Inspection Findings

Initiating Events

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*)

Significance: G Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

UNIT 2 REACTOR TRIP DUE TO OPERATION OF LOW PRESSURE TURBINE OUTSIDE ITS DESIGN.

A self-revealed finding of very low safety significance and a non cited violation (NCV) of Technical Specification (TS) 5.4.1 occurred on February 21, 2012 due the licensee's failure to establish, implement and maintain procedures regarding power operations. Specifically, procedure 2C1.4 contained information regarding the operation of the moisture separator reheater control valves that conflicted with Westinghouse Vendor Technical Manual (VTM) XH-2-164-1, "572 MW Steam Turbine Operation and Control Manual." This conflict caused a feedwater heater high level condition during Unit 2 low power operations which resulted in a manual reactor trip. The licensee initiated corrective action document 1325986 to document the trip. Corrective actions for this issue included revising procedure 2C1.4 to eliminate the conflicting information.

The inspectors determined that the failure to establish, implement and maintain procedures for power operation as required by TS 5.4.1 was a performance deficiency that required an SDP evaluation. The inspectors determined that this issue was more than minor because it was associated with the procedure quality attribute of the Initiating Events Cornerstone. This finding also impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenged critical safety functions during shutdown as well as power operations. The inspectors

determined that this issue was of very low safety significance because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors concluded that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program (CAP) area, because the licensee's resolution of a previous Unit 1 trip, due to the same cause, identified the differences in operation between the VTM and the operating procedures. However, the procedures were not revised and no evaluation was performed to determine why operating outside the designer's recommendation was acceptable (P.1(c)).

Inspection Report# : [2012003](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY SECURE MATERIALS NEAR CRITICAL DRAINAGE PATH.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," on February 4, 2013, due to the licensee's failure to follow procedures for material storage near a Unit 2 Turbine Building critical drainage path. Specifically, ten drums were not secured in accordance with Section 6.2.11 of Procedure 5AWI 8.9.0, "Internal Flooding Drainage Control." Corrective actions for this issue included removing the material and providing training to personnel on internal flooding drainage control requirements.

The inspectors determined that this finding was more than minor because if left uncorrected the unsecured material could become buoyant, impede water drainage, and impact the function of safety-related equipment following an internal flood. This finding was of very low safety significance because each question listed in IMC 0609, Appendix A, Exhibit 2, Mitigating Systems Screening Questions," was answered "no." This finding was cross-cutting in the Human Performance, Work Control area because the licensee failed to keep personnel apprised of the operational impact of work activities and plant conditions that may affect work activities H.3(b).

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY SIZED MOTOR OVERLOAD HEATERS RENDER D6 EDG INOPERABLE.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to establish measures for the selection and review for suitability of application of parts that are essential to the safety-related functions of structures, systems and components (SSC). Specifically, the licensee failed to ensure that the D5 and D6 EDG radiator fan motor thermal overload heaters were sized in accordance with Procedure H6.3, "General Electric Thermal Overload Heater Sizing for Non-Motor Operated Valve Motors." This resulted in the D6 EDG becoming inoperable due to Fan #2 on Engine #1 tripping during surveillance testing conducted on December 17, 2012.

This issue was determined to be more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone. In addition, this issue impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because each question provided in IMC

0609, Appendix A, Exhibit 2 was answered “no.” The

inspectors determined that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity P.1(d).

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO REPLACE RUBBER HOSES ON D5 AND D6 IN ACCORDANCE WITH VENDOR RECOMMENDATION.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement vendor recommendations to replace rubber hoses on the emergency diesel generators (EDGs) at a 10-year frequency. Specifically, some of the installed rubber hoses were found to be in service beyond the vendor recommended service life and if they were to degrade, could impact the safety-related functions of the EDGs. Corrective actions for this issue evaluating the condition and replacing the hoses on specific diesel engines.

The inspectors determined that this issue was more than minor because if left uncorrected, it could become a more significant safety concern because the rubber hoses could continue to degrade until operation of the diesel engines were impacted. The finding 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." Due to the age of this issue, the cause of the finding was not reflective of current performance and therefore, a cross cutting aspect was not assigned.

Inspection Report# : [2012005](#) (*pdf*)

Significance:  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 PERFORMANCE 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)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM ADEQUATE PAST OPERABILITY EVALUATIONS AFTER DISCOVERING DEGRADED COMPONENT COOLING HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately verify the adequacy of the design of systems needed during a Design Basis Accident (DBA). Specifically, the licensee failed to verify that the degradation identified during as-found inspections on the 21 and 22 Component Cooling (CC) Water Heat Exchangers would not have prevented the heat exchangers (HXs) from performing their safety functions if a DBA had occurred. The licensee entered this issue into their corrective action program as CAPs 1348544 and 1349624. The licensee concluded by additional analysis, and engineering judgment, that the Heat Exchangers had remained operable. The licensee was also considering flushing the heat exchangers more frequently; inspecting and cleaning the HXs more frequently; modifying the CC heat exchangers to provide a more effective flush; and changing plant documents and/or programs to require opening, inspecting, and cleaning of the HXs following major dredging near the plant intake. This issue was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and impacted the objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The as-found condition of the HXs challenged the capability of the CC system to fulfill its safety function; however, the licensee did not fully evaluate the condition. The finding was of very low safety significance because the design deficiency did not result in a loss of operability or functionality. The inspectors determined the finding was cross-cutting in the Human Performance, Work Control, Work Practices area because the licensee did not properly ensure that supervisory and management oversight of work activities, including contractors, supported nuclear safety (H.4(c)). Specifically, licensee personnel reviewing and approving Engineering Changes (ECs) 20044 and 20222 did not require the preparer to provide adequate technical support as part of the past operability evaluation discussed in the ECs.

Inspection Report# : [2012004](#) (pdf)

Significance:  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS AND MANAGE RISK

A finding of very low safety significance and a non-cited violation (NCV) of 10CFR 50.65(a)(4) was identified by the inspectors due to the licensee's failure to properly assess plant risk upon obtaining information which challenged the continued availability of the 21 Residual Heat Removal (RHR) pump. On April 21, 2012, licensee personnel failed to promptly recognize the unplanned orange risk condition when the 21 RHR Pump vibrations exceeded the inservice test (IST) criteria of procedure SP 2092B, "Safety Injection Check Valve Test (Head Off) Part B: RWST to RHR Flow Path Verification." Corrective actions for this event included raising the reactor cavity level 20 feet above the reactor vessel flange per TS requirements.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to properly assess and manage risk could result in a loss of shutdown cooling (a more significant safety concern) due to a loss of the RHR function. Since Unit 2 was shut down in Mode 6, the Senior Risk Analyst (SRA) assessed the risk significance of the event in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The SRAs reviewed Attachment 1, "Phase 1 Operational Checklists for Both PWRS and BWRS." The applicable checklist was Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level < 23' OR RCS Closed and No Inventory in Pressurizer Time to Boiling < 2 hours." The risk result was calculated to be 3.3E-7. Since the total estimated change in core damage frequency was greater than 1.0E-7/yr, the potential risk contribution for this finding from large early release frequency was screened using the guidance of IMC 0609, Appendix H, "Containment Integrity Significance Determination Process." The inspectors determined that this issue was of very low safety significance because it was not a design deficiency; it did not represent a loss of system safety function; it did not present a loss of safety function for one train for greater than the TS allowed outage time; and it did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding was determined to be cross-cutting in the Human Performance, Work Control area since the licensee did not plan and coordinate work activities consistent with nuclear safety (H.3(a)).

Inspection Report# : [2012003](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: FIN Finding

FAILURE TO TAKE CORRECTIVE ACTION FOR REACTOR COOLANT SYSTEM LEVEL INDICATION ISSUES.

An inspector-identified finding of very low safety significance was identified due to the failure to take corrective action for a Condition Adverse to Quality. The inspectors determined that the failure to correct for the loss of reactor coolant system (RCS) level indication during the 2010 refueling outage was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as the loss of RCS level indication during draining, may result in level decreasing to the point where the function of the safety-related residual heat removal system may be affected. These level indication issues recurred during the RCS draining on March 6, 2012, resulting in a Notice of Unusual Event (NOUE) being declared. The licensee initiated Action Request (AR) 1329470 to evaluate this issue. This finding was determined to be crosscutting in the Problem Identification and Resolution, area because the licensee had not taken appropriate corrective actions to address the RCS level indication issues (P.1 (d)). This finding was not considered a violation, as the affected RCS level indicators were not considered safety-related.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE FOR DRAINING OF REACTOR COOLANT SYSTEM.

An inspector-identified finding of very low safety significance and a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, was identified due to the licensee's use of an inadequate procedure during draining of the RCS. The inspectors determined that the procedure used during the March 6, 2012, draining of the reactor coolant to the vessel flange level, did not contain adequate guidance for identifying and compensating for inadequate reactor vessel level indication due to over pressurization of the reactor vessel. This was a performance deficiency that required an evaluation using the SDP. This deficiency was more than minor as inaccurate RCS level indication resulted in plant operators declaring an NOUE and overdraining the RCS to the point where the function of the safety-related residual heat removal system was potentially affected. The licensee initiated Action Request (AR) 1329465 to evaluate this issue.

This finding was determined to be crosscutting in the Resources area, because the licensee has not maintained complete, up-to-date procedures for performing RCS draining (H.2(c)). The licensee had prior instances where RCS level indication was lost due to vessel overpressure; however, the licensee decided not to revise the procedures based on an incorrect assumption that the procedures contained adequate guidance.

Inspection Report# : [2012011](#) (*pdf*)

Significance:  May 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO UPDATE THE CALCULATIONS FOR STEAM GENERATOR DRAINING.

An inspector-identified finding of very low safety significance and an NCV of 10 CFR 50, Appendix B, Criterion III, was identified due to the licensee's failure to update engineering calculations for the amount of nitrogen to be used during steam generator tube draining. Specifically, the failure to correctly include the number of plugged steam generator tubes into the engineering calculations was considered a performance deficiency. This deficiency was more than minor, as it contributed to the vessel overpressure that resulted in overdraining of the RCS on March 6 2012, and a NOUE. The licensee initiated ARs 01328420, 01329464, and 01328366 to evaluate this issue.

This finding was determined to be cross-cutting in the area of Resources, specifically having complete and up-to-date design documentation (H.2.(c)). Because the licensee inappropriately placed the engineering calculations in "non-active" status, they were not updated to reflect the actual number of plugged steam generator tubes. This resulted in the station procedure incorrectly stating the amount of nitrogen needed and the amount of water removed during steam generator tube draining.

Inspection Report# : [2012011](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE DURING FUSE REMOVAL ACTIVITIES.

A self-revealed finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," occurred on March 19, 2013, due to the licensee's failure to follow Procedure 5AWI 3.10.1, "Methods of Performing Verifications." Specifically, Appendix A of Procedure 5AWI 3.10.1 required that concurrent verification be performed for any action involving circuits that were opened at fuses or sliders. The failure to perform concurrent verification during the removal of a fuse during clearance order activities resulted in the incorrect fuse being removed which rendered a containment isolation valve inoperable. Corrective actions for this issue included re-installation of the fuse and returning the containment isolation valve to service. The licensee was developing additional actions to address the performance of the operators at the conclusion of the inspection period.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to properly conduct verification activities could become a more significant safety concern. This finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," was answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to assure human error prevention techniques were used

such that work activities were performed safely H.4(a).

Inspection Report# : [2013002](#) (*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

Last modified : June 04, 2013

Prairie Island 2 2Q/2013 Plant Inspection Findings

Initiating Events

Significance:  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:  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 remain invalid 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:  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 conservatism 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:  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.

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 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 $1.9E^{-7}/\text{yr}$. 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 driven 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 PROPERLY SECURE MATERIALS NEAR CRITICAL DRAINAGE PATH.

The inspectors identified a 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 February 4, 2013, due to the licensee's failure to follow procedures for material storage near a Unit 2 Turbine Building critical drainage path. Specifically, ten drums were not secured in accordance with Section 6.2.11 of Procedure 5AWI 8.9.0, "Internal Flooding Drainage Control." Corrective actions for this issue included removing the material and providing training to personnel on internal flooding drainage control requirements.

The inspectors determined that this finding was more than minor because if left uncorrected the unsecured material could become buoyant, impede water drainage, and impact the function of safety-related equipment following an

internal flood. This finding was of very low safety significance because each question listed in IMC 0609, Appendix A, Exhibit 2, Mitigating Systems Screening Questions,” was answered “no.” This finding was cross-cutting in the Human Performance, Work Control area because the licensee failed to keep personnel apprised of the operational impact of work activities and plant conditions that may affect work activities H.3(b).

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY SIZED MOTOR OVERLOAD HEATERS RENDER D6 EDG INOPERABLE.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the failure to establish measures for the selection and review for suitability of application of parts that are essential to the safety-related functions of structures, systems and components (SSC). Specifically, the licensee failed to ensure that the D5 and D6 EDG radiator fan motor thermal overload heaters were sized in accordance with Procedure H6.3, “General Electric Thermal Overload Heater Sizing for Non-Motor Operated Valve Motors.” This resulted in the D6 EDG becoming inoperable due to Fan #2 on Engine #1 tripping during surveillance testing conducted on December 17, 2012.

This issue was determined to be more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone. In addition, this issue impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 2 was answered “no.” The

inspectors determined that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity P.1(d).

Inspection Report# : [2013002](#) (pdf)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human

Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO REPLACE RUBBER HOSES ON D5 AND D6 IN ACCORDANCE WITH VENDOR RECOMMENDATION.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” due to the licensee’s failure to implement vendor recommendations to replace rubber hoses on the emergency diesel generators (EDGs) at a 10-year frequency. Specifically, some of the installed rubber hoses were found to be in service beyond the vendor recommended service life and if they were to degrade, could impact the safety-related functions of the EDGs. Corrective actions for this issue evaluating the condition and replacing the hoses on specific diesel engines.

The inspectors determined that this issue was more than minor because if left uncorrected, it could become a more significant safety concern because the rubber hoses could continue to degrade until operation of the diesel engines

were impacted. The finding 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." Due to the age of this issue, the cause of the finding was not reflective of current performance and therefore, a cross cutting aspect was not assigned.

Inspection Report# : [2012005](#) (*pdf*)

Significance:  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 PERFORMANCE 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*)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM ADEQUATE PAST OPERABILITY EVALUATIONS AFTER DISCOVERING DEGRADED COMPONENT COOLING HEAT EXCHANGERS

The inspectors identified a finding of very low safety significance and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to adequately verify the adequacy of the design of systems needed during a Design Basis Accident (DBA). Specifically, the licensee failed to verify that the degradation identified during as-found inspections on the 21 and 22 Component Cooling (CC) Water Heat Exchangers would not have prevented the heat exchangers (HXs) from performing their safety functions if a DBA had occurred. The licensee entered this issue into their corrective action program as CAPs 1348544 and 1349624. The licensee concluded by additional analysis, and engineering judgment, that the Heat Exchangers had remained operable. The licensee was also considering flushing the heat exchangers more frequently; inspecting and cleaning the HXs more frequently; modifying the CC heat exchangers to provide a more effective flush; and changing plant documents and/or programs to require opening, inspecting, and cleaning of the HXs following major dredging near the plant intake. This issue was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and impacted the objective of ensuring the capability of systems that respond to initiating

events to prevent undesirable consequences. The as-found condition of the HXs challenged the capability of the CC system to fulfill its safety function; however, the licensee did not fully evaluate the condition. The finding was of very low safety significance because the design deficiency did not result in a loss of operability or functionality. The inspectors determined the finding was cross-cutting in the Human Performance, Work Control, Work Practices area because the licensee did not properly ensure that supervisory and management oversight of work activities, including contractors, supported nuclear safety (H.4(c)). Specifically, licensee personnel reviewing and approving Engineering Changes (ECs) 20044 and 20222 did not require the preparer to provide adequate technical support as part of the past operability evaluation discussed in the ECs.

Inspection Report# : [2012004](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE DURING FUSE REMOVAL ACTIVITIES.

A self-revealed finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," occurred on March 19, 2013, due to the licensee's failure to follow Procedure 5AWI 3.10.1, "Methods of Performing Verifications." Specifically, Appendix A of Procedure 5AWI 3.10.1 required that concurrent verification be performed for any action involving circuits that were opened at fuses or sliders. The failure to perform concurrent verification during the removal of a fuse during clearance order activities resulted in the incorrect fuse being removed which rendered a containment isolation valve inoperable. Corrective actions for this issue included re-installation of the fuse and returning the containment isolation valve to service. The licensee was developing additional actions to address the performance of the operators at the conclusion of the inspection period.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to properly conduct verification activities could become a more significant safety concern. This finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," was answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to assure human error prevention techniques were used such that work activities were performed safely H.4(a).

Inspection Report# : [2013002](#) (*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

Last modified : September 03, 2013

Prairie Island 2 3Q/2013 Plant Inspection Findings

Initiating Events

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 Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED 2R-49 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" was identified on July 2, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances while performing maintenance. Specifically, maintenance personnel rendered Unit 2 Containment High Range Area Monitor 2R-49 inoperable after lifting a wire as part of a Unit 1 Containment High Range Area Monitor 1R-49 power supply replacement. Corrective actions for this issue included returning 1R-49 and 2R-49 to service and providing additional supervisory involvement to ensure all maintenance personnel were aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

The inspectors determined that this issue was more than minor because it was associated with the 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 (i.e., core damage). This issue was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," were answered "no." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance or plant structures, systems, and components (H.3(a)).

Inspection Report# : [2013004](#) (pdf)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED REACTOR PROTECTION INSTRUMENT AC INVERTER 13 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" was identified on July 24, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances when performing maintenance on the 2R-49 Unit 2 Containment High Range Area Monitor power supply. Specifically, the #13 reactor protection instrument inverter was rendered inoperable when two terminals were shorted during the power supply replacement. Corrective actions for this issue included returning the #13 instrument inverter to an operable status and providing additional supervisory involvement to ensure all maintenance personnel were made aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance; plant structures, systems, and components; human system interface; or include the need for planned compensatory actions (H.3(a)).

Inspection Report# : [2013004](#) (pdf)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS D6 EDG OPERABILITY.

An inspector-identified finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures or Drawings," was identified on August 15, 2013, due to the licensee's failure to follow Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the licensee failed to evaluate the ability of the D6 emergency diesel generator (EDG) to perform its specified safety function over the expected voltage range of 3740-4580 volts after identifying that the radiator fan motor overload relays were improperly sized. Corrective actions for this issue included removing the D6 EDG from service to replace the relays and sharing the lessons learned from the failure to follow procedures with engineering personnel.

The inspectors determined that this issue was more than minor because it was associated with the design control and equipment performance 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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions regarding EDG operating voltage when making decisions regarding the D6 EDG's ability to perform its specified safety function with inadequately sized radiator fan motor thermal overload relays (H.1(b)).

Inspection Report# : [2013004](#) (*pdf*)

Significance:  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 remain invalid 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:  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 conservatism 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:  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.

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 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:  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 driven 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:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY SECURE MATERIALS NEAR CRITICAL DRAINAGE PATH.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," on February 4, 2013, due to the licensee's failure to follow procedures for material storage near a Unit 2 Turbine Building critical drainage path. Specifically, ten drums were not secured in accordance with Section 6.2.11 of Procedure 5AWI 8.9.0, "Internal Flooding Drainage Control." Corrective actions for this issue included removing the material and providing training to personnel on internal flooding drainage control requirements.

The inspectors determined that this finding was more than minor because if left uncorrected the unsecured material could become buoyant, impede water drainage, and impact the function of safety-related equipment following an internal flood. This finding was of very low safety significance because each question listed in IMC 0609, Appendix A, Exhibit 2, Mitigating Systems Screening Questions," was answered "no." This finding was cross-cutting in the Human Performance, Work Control area because the licensee failed to keep personnel apprised of the operational impact of work activities and plant conditions that may affect work activities H.3(b).

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY SIZED MOTOR OVERLOAD HEATERS RENDER D6 EDG INOPERABLE.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to establish measures for the selection and review for suitability of application of parts that are essential to the safety-related functions of structures, systems and components (SSC). Specifically, the licensee failed to ensure that the D5 and D6 EDG radiator fan motor thermal overload heaters were sized in accordance with Procedure H6.3, "General Electric Thermal Overload Heater Sizing for Non-Motor Operated Valve Motors." This resulted in the D6 EDG becoming inoperable due to Fan #2 on Engine #1 tripping during surveillance testing conducted on December 17, 2012.

This issue was determined to be more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone. In addition, this issue impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 2 was answered "no." The

inspectors determined that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity P.1(d).

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, “Completeness and Accuracy of Information,” and an associated finding of very low safety significance (Green) due to the licensee’s failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a

threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO REPLACE RUBBER HOSES ON D5 AND D6 IN ACCORDANCE WITH VENDOR RECOMMENDATION.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," due to the licensee's failure to implement vendor recommendations to replace rubber hoses on the emergency diesel generators (EDGs) at a 10-year frequency. Specifically, some of the installed rubber hoses were found to be in service beyond the vendor recommended service life and if they were to degrade, could impact the safety-related functions of the EDGs. Corrective actions for this issue evaluating the condition and replacing the hoses on specific diesel engines.

The inspectors determined that this issue was more than minor because if left uncorrected, it could become a more significant safety concern because the rubber hoses could continue to degrade until operation of the diesel engines were impacted. The finding 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." Due to the age of this issue, the cause of the finding was not reflective of current performance and therefore, a cross cutting aspect was not assigned.

Inspection Report# : [2012005](#) (*pdf*)

Significance:  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 PERFORMANCE 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

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE DURING FUSE REMOVAL ACTIVITIES.

A self-revealed finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," occurred on March 19, 2013, due to the licensee's failure to follow Procedure 5AWI 3.10.1, "Methods of Performing Verifications." Specifically, Appendix A of Procedure 5AWI 3.10.1 required that concurrent verification be performed for any action involving circuits that were opened at fuses or sliders. The failure to perform concurrent verification during the removal of a fuse during clearance order activities resulted in the incorrect fuse being removed which rendered a containment isolation valve inoperable. Corrective actions for this issue included re-installation of the fuse and returning the containment isolation valve to service. The licensee was developing additional actions to address the performance of the operators at the conclusion of the inspection period.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to properly conduct verification activities could become a more significant safety concern. This finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," was answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to assure human error prevention techniques were used such that work activities were performed safely H.4(a).

Inspection Report# : [2013002](#) (*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

Last modified : December 03, 2013

Prairie Island 2 4Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO EVALUATE CORROSIVE EFFECTS OF BORIC ACID ON THE 22 RESIDUAL HEAT REMOVAL PUMP.

The inspectors identified a finding of very low safety significance on October 7, 2013, due to the failure to perform an adequate boric acid evaluation in accordance with Procedure H2, "Boric Acid Corrosion Control Program." Specifically, the licensee failed to properly evaluate the impact of a boric acid leak following the leak coming into contact with carbon steel components on the 22 residual heat removal pump casing. Corrective actions included moving a carbon steel bolt for visual inspection and completing a technically adequate boric acid corrosion evaluation.

The inspectors determined that this issue was more than minor because if left uncorrected the failure to complete technically adequate boric acid corrosion evaluations could result in components with questionable structural integrity being left in service. The inspectors determined that this issue was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Appendix A, Exhibit 2, were answered "no." The inspectors concluded that this issue was cross-cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions while determining the applicability of a previously completed boric acid evaluation to a current plant condition. No violation was identified since all NRC requirements were met (H.1(b)).
Inspection Report# : [2013005](#) (*pdf*)

Significance: G Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE DESIGN CONTROL MEASURES FOR SELECTION OF REPLACEMENT PARTS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," on October 8, 2013, due to the failure to establish measures for the selection of parts that are essential to the safety-related functions of structures, systems, or components (SSCs). Specifically, the licensee failed to properly evaluate the specifications and quality of replacement parts such as gaskets, o-rings, packing materials, and diaphragms to ensure that these parts were suitable for installation in safety-related systems. As a result, multiple systems were required to be declared operable but non-conforming. Corrective actions for this issue included ensuring personnel understood the requirements regarding parts selection,

2

determining the correct parts to be used and initiating work orders to ensure that parts were replaced in the future if required.

The inspectors determined that this issue was more than minor because if left uncorrected, the installation of

parts/materials which failed to meet requirements could lead to subsequent part failure. This failure would adversely impact the ability of safety-related equipment to perform its safety function. The inspectors determined that this issue was of very low safety significance because Question 1 in IMC 0609, Attachment 0609.04, Attachment A, Exhibit 2, was answered “yes.” The inspectors concluded that this issue was cross-cutting in the Human Performance, Resources area because the licensee’s parts specification and quality level documentation was not complete, accurate and/or up to date (H.2(c)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED 2R-49 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings” was identified on July 2, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances while performing maintenance. Specifically, maintenance personnel rendered Unit 2 Containment High Range Area Monitor 2R-49 inoperable after lifting a wire as part of a Unit 1 Containment High Range Area Monitor 1R-49 power supply replacement. Corrective actions for this issue included returning 1R-49 and 2R-49 to service and providing additional supervisory involvement to ensure all maintenance personnel were aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

The inspectors determined that this issue was more than minor because it was associated with the 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 (i.e., core damage). This issue was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” were answered “no.” This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance or plant structures, systems, and components (H.3(a)).

Inspection Report# : [2013004](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED REACTOR PROTECTION INSTRUMENT AC INVERTER 13 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings” was identified on July 24, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances when performing maintenance on the 2R-49 Unit 2 Containment High Range Area Monitor power supply. Specifically, the #13 reactor protection instrument inverter was rendered inoperable when two terminals were shorted during the power supply replacement. Corrective actions for this issue included returning the #13 instrument inverter to an operable status and providing additional supervisory involvement to ensure all maintenance personnel were made aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance; plant structures, systems, and components; human system interface; or include the need for planned compensatory actions (H.3(a)).

Inspection Report# : [2013004](#) (pdf)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS D6 EDG OPERABILITY.

An inspector-identified finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures or Drawings," was identified on August 15, 2013, due to the licensee's failure to follow Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the licensee failed to evaluate the ability of the D6 emergency diesel generator (EDG) to perform its specified safety function over the expected voltage range of 3740-4580 volts after identifying that the radiator fan motor overload relays were improperly sized. Corrective actions for this issue included removing the D6 EDG from service to replace the relays and sharing the lessons learned from the failure to follow procedures with engineering personnel.

The inspectors determined that this issue was more than minor because it was associated with the design control and equipment performance 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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions regarding EDG operating voltage when making decisions regarding the D6 EDG's ability to perform its specified safety function with inadequately sized radiator fan motor thermal overload relays (H.1(b)).

Inspection Report# : [2013004](#) (pdf)

Significance:  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 remain invalid 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:  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 conservatism 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:  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.

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 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:  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 driven 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:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY SECURE MATERIALS NEAR CRITICAL DRAINAGE PATH.

The inspectors identified a 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 February 4, 2013, due to the licensee's failure to follow procedures for material storage near a Unit 2 Turbine Building critical drainage path. Specifically, ten drums were not secured in accordance with Section 6.2.11 of Procedure 5AWI 8.9.0, "Internal Flooding Drainage Control." Corrective actions for this issue included removing the material and providing training to personnel on internal flooding drainage control requirements.

The inspectors determined that this finding was more than minor because if left uncorrected the unsecured material could become buoyant, impede water drainage, and impact the function of safety-related equipment following an internal flood. This finding was of very low safety significance because each question listed in IMC 0609, Appendix A, Exhibit 2, Mitigating Systems Screening Questions," was answered "no." This finding was cross-cutting in the

Human Performance, Work Control area because the licensee failed to keep personnel apprised of the operational impact of work activities and plant conditions that may affect work activities H.3(b).

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

IMPROPERLY SIZED MOTOR OVERLOAD HEATERS RENDER D6 EDG INOPERABLE.

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to establish measures for the selection and review for suitability of application of parts that are essential to the safety-related functions of structures, systems and components (SSC). Specifically, the licensee failed to ensure that the D5 and D6 EDG radiator fan motor thermal overload heaters were sized in accordance with Procedure H6.3, "General Electric Thermal Overload Heater Sizing for Non-Motor Operated Valve Motors." This resulted in the D6 EDG becoming inoperable due to Fan #2 on Engine #1 tripping during surveillance testing conducted on December 17, 2012.

This issue was determined to be more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone. In addition, this issue impacted the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 2 was answered "no." The

inspectors determined that this issue was cross cutting in the Problem Identification and Resolution, Corrective Action Program area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity P.1(d).

Inspection Report# : [2013002](#) (*pdf*)

Significance:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ACCURATE PERFORMANCE INDICATOR DATA.

The inspectors identified a Severity Level IV non-cited violation of 10 CFR Part 50.9, "Completeness and Accuracy of Information," and an associated finding of very low safety significance (Green) due to the licensee's failure to provide information to the Commission that was complete and accurate in all material respects. Specifically, the licensee failed to follow procedures to ensure that the Mitigating Systems Performance Index (MSPI) for the emergency alternating current power systems was accurately reported for the third and fourth quarters of 2012. Once the information inaccuracies were corrected, the Unit 2 MSPI performance indicator (PI) changed from green to white. Corrective actions for this issue included correcting the inaccurate information, assigning dedicated resources to manage the PI reporting process, and performing an extent of condition review to ensure that the remaining PIs were appropriately reported.

This issue was determined to be more than minor because it was related to a PI and caused the PI to exceed a threshold. This finding was evaluated for significance using IMC 0609, Appendix M, because the other SDP methods and tools were not adequate to determine the significance of the finding. After consulting with NRC management, the inspectors determined that this finding was of very low safety significance because the actual time the PI was inaccurately reported was short and the reporting inaccuracies had no impact on the ability of safety related equipment to perform its safety function. The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the inaccurate reporting was caused by a failure to follow procedures H.4 (b).

The violation of 10 CFR Part 50.9 impacted the ability of the NRC to perform its regulatory oversight function and was determined to be Severity Level IV based upon Example 6.9.d.11 of the NRC Enforcement Policy.

Inspection Report# : [2013002](#) (*pdf*)

Barrier Integrity

Significance:  Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURE DURING FUSE REMOVAL ACTIVITIES.

A self-revealed finding of very low safety significance and a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," occurred on March 19, 2013, due to the licensee's failure to follow Procedure 5AWI 3.10.1, "Methods of Performing Verifications." Specifically, Appendix A of Procedure 5AWI 3.10.1 required that concurrent verification be performed for any action involving circuits that were opened at fuses or sliders. The failure to perform concurrent verification during the removal of a fuse during clearance order activities resulted in the incorrect fuse being removed which rendered a containment isolation valve inoperable. Corrective actions for this issue included re-installation of the fuse and returning the containment isolation valve to service. The licensee was developing additional actions to address the performance of the operators at the conclusion of the inspection period.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to properly conduct verification activities could become a more significant safety concern. This finding was of very low safety significance because each question provided in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," was answered "no." The inspectors determined that this finding was cross cutting in the Human Performance, Work Practices area because the licensee failed to assure human error prevention techniques were used such that work activities were performed safely H.4(a).

Inspection Report# : [2013002](#) (*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

Last modified : February 24, 2014

Prairie Island 2

1Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Blowdown (SGBD) Pipe Support Anchorages Failure to Meet Design Requirements

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to meet the requirements of the American Institute of Steel Construction (AISC) specification. Specifically, the licensee did not use the specified minimum yield strength of the outside lift system (OLS) girder material to establish an appropriate factor of safety to qualify the allowable loads that can be safely handled by the OLS girder. The AISC factor of safety to failure ensured the OLS girder would maintain structural integrity (no permanent deformation or structural failure) when subjected to the applied loads (lifted load, wind load, design basis earthquake load). This issue was entered into the licensee's Corrective Action Program (CAP) as CAP 1404203, "OLS calculation used actual material strength rather than ASTM." The licensee performed a functionality assessment to demonstrate that there was reasonable assurance the OLS girder remained capable of performing its intended design functions.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the load handling reliability of the OLS girder inherently decreased when the AISC requirements were not met. The inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 -- Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown (defueled) conditions, the inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRS and BWRS," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance. No violation of regulatory requirements is associated with this finding. The inspectors identified that there was a Human Performance, Design Margin (H.6) cross-cutting aspect associated with this finding for the licensee failure to ensure the OLS girder reflected the intended design margins.

Inspection Report# : [2013011](#) (*pdf*)

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Blowdown (SGBD) Pipe Support Anchorages Failure to Meet Design Requirements

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to meet the requirements of the American Institute of Steel Construction (AISC) specification. Specifically, the licensee did not use the specified minimum yield strength of the outside lift system (OLS) girder material to establish an appropriate factor of safety to qualify the allowable loads that can be safely handled by the OLS girder. The AISC factor of safety to failure ensured the OLS girder would maintain structural integrity (no permanent deformation or structural failure) when subjected to the applied loads (lifted load, wind load, design basis earthquake load). This issue was entered into the licensee's Corrective Action Program (CAP) as CAP 1404203, "OLS calculation used actual material strength

rather than ASTM.” The licensee performed a functionality assessment to demonstrate that there was reasonable assurance the OLS girder remained capable of performing its intended design functions.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the load handling reliability of the OLS girder inherently decreased when the AISC requirements were not met. The inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 -- Initial Screening and Characterization of Findings,” Table 3. Since the finding was associated with shutdown (defueled) conditions, the inspectors used IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process.” The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, “Phase I Operational Checklists for Both PWRs and BWRs,” for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance. No violation of regulatory requirements is associated with this finding. The inspectors identified that there was a Human Performance, Design Margin (H.6) cross-cutting aspect associated with this finding for the licensee failure to ensure the OLS girder reflected the intended design margins.

Inspection Report# : [2013011](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO EVALUATE CORROSIVE EFFECTS OF BORIC ACID ON THE 22 RESIDUAL HEAT REMOVAL PUMP.

The inspectors identified a finding of very low safety significance on October 7, 2013, due to the failure to perform an adequate boric acid evaluation in accordance with Procedure H2, “Boric Acid Corrosion Control Program.”

Specifically, the licensee failed to properly evaluate the impact of a boric acid leak following the leak coming into contact with carbon steel components on the 22 residual heat removal pump casing. Corrective actions included moving a carbon steel bolt for visual inspection and completing a technically adequate boric acid corrosion evaluation.

The inspectors determined that this issue was more than minor because if left uncorrected the failure to complete technically adequate boric acid corrosion evaluations could result in components with questionable structural integrity being left in service. The inspectors determined that this issue was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Appendix A, Exhibit 2, were answered “no.” The inspectors concluded that this issue was cross-cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions while determining the applicability of a previously completed boric acid evaluation to a current plant condition. No violation was identified since all NRC requirements were met (H.1(b)).

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE DESIGN CONTROL MEASURES FOR SELECTION OF REPLACEMENT PARTS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B,

Criterion III, "Design Control," on October 8, 2013, due to the failure to establish measures for the selection of parts that are essential to the safety-related functions of structures, systems, or components (SSCs). Specifically, the licensee failed to properly evaluate the specifications and quality of replacement parts such as gaskets, o-rings, packing materials, and diaphragms to ensure that these parts were suitable for installation in safety-related systems. As a result, multiple systems were required to be declared operable but non-conforming. Corrective actions for this issue included ensuring personnel understood the requirements regarding parts selection,

2

determining the correct parts to be used and initiating work orders to ensure that parts were replaced in the future if required.

The inspectors determined that this issue was more than minor because if left uncorrected, the installation of parts/materials which failed to meet requirements could lead to subsequent part failure. This failure would adversely impact the ability of safety-related equipment to perform its safety function. The inspectors determined that this issue was of very low safety significance because Question 1 in IMC 0609, Attachment 0609.04, Attachment A, Exhibit 2, was answered "yes." The inspectors concluded that this issue was cross-cutting in the Human Performance, Resources area because the licensee's parts specification and quality level documentation was not complete, accurate and/or up to date (H.2(c)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED 2R-49 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" was identified on July 2, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances while performing maintenance. Specifically, maintenance personnel rendered Unit 2 Containment High Range Area Monitor 2R-49 inoperable after lifting a wire as part of a Unit 1 Containment High Range Area Monitor 1R-49 power supply replacement. Corrective actions for this issue included returning 1R-49 and 2R-49 to service and providing additional supervisory involvement to ensure all maintenance personnel were aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

The inspectors determined that this issue was more than minor because it was associated with the 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 (i.e., core damage). This issue was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," were answered "no." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance or plant structures, systems, and components (H.3(a)).

Inspection Report# : [2013004](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED REACTOR PROTECTION INSTRUMENT AC INVERTER 13 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" was identified on July 24, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances when performing

maintenance on the 2R-49 Unit 2 Containment High Range Area Monitor power supply. Specifically, the #13 reactor protection instrument inverter was rendered inoperable when two terminals were shorted during the power supply replacement. Corrective actions for this issue included returning the #13 instrument inverter to an operable status and providing additional supervisory involvement to ensure all maintenance personnel were made aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance; plant structures, systems, and components; human system interface; or include the need for planned compensatory actions (H.3(a)).

Inspection Report# : [2013004](#) (pdf)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS D6 EDG OPERABILITY.

An inspector-identified finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures or Drawings," was identified on August 15, 2013, due to the licensee's failure to follow Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the licensee failed to evaluate the ability of the D6 emergency diesel generator (EDG) to perform its specified safety function over the expected voltage range of 3740-4580 volts after identifying that the radiator fan motor overload relays were improperly sized. Corrective actions for this issue included removing the D6 EDG from service to replace the relays and sharing the lessons learned from the failure to follow procedures with engineering personnel.

The inspectors determined that this issue was more than minor because it was associated with the design control and equipment performance 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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions regarding EDG operating voltage when making decisions regarding the D6 EDG's ability to perform its specified safety function with inadequately sized radiator fan motor thermal overload relays (H.1(b)).

Inspection Report# : [2013004](#) (pdf)

Significance:  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 remain invalid 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:  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 conservatism 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:  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.

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 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:  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 driven 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*)

Barrier Integrity

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: FIN Finding

Outside Lift System (OIS) Girder Failure to Meet American Institute of Steel Construction (AISC)

Requirements

The inspectors identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for the failure to provide adequate design control measures for the steam generator blowdown (SGBD) pipe supports 8D-2SGB-1A, 2-RBDH-5294, 2-RBDH-606, 2 RBDH-363, 2-RBDH-350, 2-RBDH-349, 2-RBDH-339, and 2-RBDH-358. Specifically the SGBD pipe supports design was non-conservative with respect to Class I requirements as defined in Updated Safety Analysis Report (USAR) Section 12, "Plant Structures and Shielding", and referenced specifications. The licensee documented the violation in its CAP as CAPs 1405404 and 1412225 and performed an evaluation to demonstrate that there was reasonable assurance that the SGBD pipe supports remained capable of performing their safety functions.

The inspectors determined the finding was more than minor because the finding adversely affected the barrier integrity cornerstone and the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's calculations were not sufficient to demonstrate that the pipe supports were capable of properly supporting SGBD piping and isolation valves during design basis events, and hence ensure containment integrity. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, "The Significance Determination Process (SDP) for Findings At-Power," Appendix A, Exhibit 3 (Section B). The inspectors determined that this finding was very low safety significance (Green) because each of the screening questions was answered "no." Specifically, the SGBD pipe supports were subsequently determined to be capable of performing their safety function. The inspectors identified a Human Performance, Documentation (H.7) cross-cutting aspect associated with this finding for the licensee's failure to ensure complete, accurate, and, up-to-date design documentation. Specifically, the licensee failed to provide adequate oversight of design calculations and documentation of as-built conditions during the SGBD pipe support re-analysis conducted to support the steam generators replacement.

Inspection Report# : [2013011](#) (*pdf*)

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: FIN Finding

Outside Lift System (OLS) Girder Failure to Meet American Institute of Steel Construction (AISC)

Requirements

The inspectors identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for the failure to provide adequate design control measures for the steam generator blowdown (SGBD) pipe supports 8D-2SGB-1A, 2-RBDH-5294, 2-RBDH-606, 2 RBDH-363, 2-RBDH-350, 2-RBDH-349, 2-RBDH-339, and 2-RBDH-358. Specifically the SGBD pipe supports design was non-conservative with respect to Class I requirements as defined in Updated Safety Analysis Report (USAR) Section 12, "Plant Structures and Shielding", and referenced specifications. The licensee documented the violation in its CAP as CAPs 1405404 and 1412225 and performed an evaluation to demonstrate that there was reasonable assurance that the SGBD pipe supports remained capable of performing their safety functions.

The inspectors determined the finding was more than minor because the finding adversely affected the barrier integrity cornerstone and the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's calculations were not sufficient to demonstrate that the pipe

supports were capable of properly supporting SGBD piping and isolation valves during design basis events, and hence ensure containment integrity. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, "The Significance Determination Process (SDP) for Findings At-Power," Appendix A, Exhibit 3 (Section B). The inspectors determined that this finding was very low safety significance (Green) because each of the screening questions was answered "no." Specifically, the SGBD pipe supports were subsequently determined to be capable of performing their safety function. The inspectors identified a Human Performance, Documentation (H.7) cross-cutting aspect associated with this finding for the licensee's failure to ensure complete, accurate, and, up-to-date design documentation. Specifically, the licensee failed to provide adequate oversight of design calculations and documentation of as-built conditions during the SGBD pipe support re-analysis conducted to support the steam generators replacement.

Inspection Report# : [2013011](#) (*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

Last modified : May 30, 2014

Prairie Island 2

2Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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*)

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: FIN Finding

Outside Lift System (OLS) Girder Failure to Meet American Institute of Steel Construction (AISC) Requirements

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to meet the requirements of the American Institute of Steel Construction (AISC) specification. Specifically, the licensee did not use the specified minimum yield strength of the outside lift system (OLS) girder material to establish an appropriate

factor of safety to qualify the allowable loads that can be safely handled by the OLS girder. The AISC factor of safety to failure ensured the OLS girder would maintain structural integrity (no permanent deformation or structural failure) when subjected to the applied loads (lifted load, wind load, design basis earthquake load). This issue was entered into the licensee's Corrective Action Program (CAP) as CAP 1404203, "OLS calculation used actual material strength rather than ASTM." The licensee performed a functionality assessment to demonstrate that there was reasonable assurance the OLS girder remained capable of performing its intended design functions.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the load handling reliability of the OLS girder inherently decreased when the AISC requirements were not met. The inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 -- Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown (defueled) conditions, the inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs and BWRs," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance. No violation of regulatory requirements is associated with this finding. The inspectors identified that there was a Human Performance, Design Margin (H.6) cross-cutting aspect associated with this finding for the licensee failure to ensure the OLS girder reflected the intended design margins.

Inspection Report# : [2013011](#) (*pdf*)

Mitigating Systems

Significance:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  May 02, 2014

Identified By: NRC

Item Type: NCV NonCited 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)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO EVALUATE CORROSIVE EFFECTS OF BORIC ACID ON THE 22 RESIDUAL HEAT REMOVAL PUMP.

The inspectors identified a finding of very low safety significance on October 7, 2013, due to the failure to perform an adequate boric acid evaluation in accordance with Procedure H2, "Boric Acid Corrosion Control Program." Specifically, the licensee failed to properly evaluate the impact of a boric acid leak following the leak coming into contact with carbon steel components on the 22 residual heat removal pump casing. Corrective actions included moving a carbon steel bolt for visual inspection and completing a technically adequate boric acid corrosion evaluation.

The inspectors determined that this issue was more than minor because if left uncorrected the failure to complete technically adequate boric acid corrosion evaluations could result in components with questionable structural integrity being left in service. The inspectors determined that this issue was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Appendix A, Exhibit 2, were answered "no." The inspectors concluded that this issue was cross-cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions while determining the applicability of a previously completed boric acid evaluation to a current plant condition. No violation was identified since all NRC requirements were met (H.1(b)).

Inspection Report# : [2013005](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE DESIGN CONTROL MEASURES FOR SELECTION OF REPLACEMENT PARTS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," on October 8, 2013, due to the failure to establish measures for the selection of parts that are essential to the safety-related functions of structures, systems, or components (SSCs). Specifically, the

licensee failed to properly evaluate the specifications and quality of replacement parts such as gaskets, o-rings, packing materials, and diaphragms to ensure that these parts were suitable for installation in safety-related systems. As a result, multiple systems were required to be declared operable but non-conforming. Corrective actions for this issue included ensuring personnel understood the requirements regarding parts selection,

2

determining the correct parts to be used and initiating work orders to ensure that parts were replaced in the future if required.

The inspectors determined that this issue was more than minor because if left uncorrected, the installation of parts/materials which failed to meet requirements could lead to subsequent part failure. This failure would adversely impact the ability of safety-related equipment to perform its safety function. The inspectors determined that this issue was of very low safety significance because Question 1 in IMC 0609, Attachment 0609.04, Attachment A, Exhibit 2, was answered “yes.” The inspectors concluded that this issue was cross-cutting in the Human Performance, Resources area because the licensee’s parts specification and quality level documentation was not complete, accurate and/or up to date (H.2(c)).

Inspection Report# : [2013005](#) (pdf)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED 2R-49 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings” was identified on July 2, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances while performing maintenance. Specifically, maintenance personnel rendered Unit 2 Containment High Range Area Monitor 2R-49 inoperable after lifting a wire as part of a Unit 1 Containment High Range Area Monitor 1R-49 power supply replacement. Corrective actions for this issue included returning 1R-49 and 2R-49 to service and providing additional supervisory involvement to ensure all maintenance personnel were aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

The inspectors determined that this issue was more than minor because it was associated with the 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 (i.e., core damage). This issue was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” were answered “no.” This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance or plant structures, systems, and components (H.3(a)).

Inspection Report# : [2013004](#) (pdf)

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

IMPROPER WORK INSTRUCTIONS RENDERED REACTOR PROTECTION INSTRUMENT AC INVERTER 13 INOPERABLE.

A self-revealing finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings” was identified on July 24, 2013, for the failure to have documented instructions, procedures, or drawings, of a type appropriate to the circumstances when performing maintenance on the 2R-49 Unit 2 Containment High Range Area Monitor power supply. Specifically, the #13 reactor protection instrument inverter was rendered inoperable when two terminals were shorted during the power supply

replacement. Corrective actions for this issue included returning the #13 instrument inverter to an operable status and providing additional supervisory involvement to ensure all maintenance personnel were made aware of expectations for ensuring that energized leads were appropriately identified, that adequate barriers were established to prevent inadvertent contact with energized leads, and ensuring that access to leads to be lifted were adequate for safe manipulation.

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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Work Control area because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact human performance; plant structures, systems, and components; human system interface; or include the need for planned compensatory actions (H.3(a)).

Inspection Report# : [2013004](#) (*pdf*)

Significance:  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ASSESS D6 EDG OPERABILITY.

An inspector-identified finding of very low safety significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures or Drawings," was identified on August 15, 2013, due to the licensee's failure to follow Procedure FP OP OL 01, "Operability/Functionality Determination." Specifically, the licensee failed to evaluate the ability of the D6 emergency diesel generator (EDG) to perform its specified safety function over the expected voltage range of 3740-4580 volts after identifying that the radiator fan motor overload relays were improperly sized. Corrective actions for this issue included removing the D6 EDG from service to replace the relays and sharing the lessons learned from the failure to follow procedures with engineering personnel.

The inspectors determined that this issue was more than minor because it was associated with the design control and equipment performance 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 (i.e., core damage). 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." This issue was cross cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions regarding EDG operating voltage when making decisions regarding the D6 EDG's ability to perform its specified safety function with inadequately sized radiator fan motor thermal overload relays (H.1(b)).

Inspection Report# : [2013004](#) (*pdf*)

Significance:  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 remain invalid 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)

Barrier Integrity

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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*)

Significance:  Jan 16, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Blowdown (SGBD) Pipe Support Anchorages Failure to Meet Design Requirements

The inspectors identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for the failure to provide adequate design control measures for the steam generator blowdown (SGBD) pipe supports 8D-2SGB-1A, 2-RBDH-5294, 2-RBDH-606, 2 RBDH-363, 2-RBDH-350, 2-RBDH-349, 2-RBDH-339, and 2-RBDH-358. Specifically the SGBD pipe supports design was non-conservative with respect to Class I requirements as defined in Updated Safety Analysis Report (USAR) Section 12, "Plant Structures and Shielding", and referenced specifications. The licensee documented the violation in its CAP as CAPs 1405404 and 1412225 and performed an evaluation to demonstrate that there was reasonable assurance that the SGBD pipe supports remained capable of performing their safety functions.

The inspectors determined the finding was more than minor because the finding adversely affected the barrier integrity cornerstone and the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's calculations were not sufficient to demonstrate that the pipe supports were capable of properly supporting SGBD piping and isolation valves during design basis events, and hence ensure containment integrity. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, "The Significance Determination Process (SDP) for Findings At-Power," Appendix A, Exhibit 3 (Section B). The inspectors determined that this finding was very low safety significance (Green) because each of the screening questions was answered "no." Specifically, the SGBD pipe supports were subsequently determined to be capable of performing their safety function. The inspectors identified a Human Performance, Documentation (H.7) cross-cutting aspect associated with this finding for the licensee's failure

to ensure complete, accurate, and, up-to-date design documentation. Specifically, the licensee failed to provide adequate oversight of design calculations and documentation of as-built conditions during the SGBD pipe support re-analysis conducted to support the steam generators replacement.

Inspection Report# : [2013011](#) (*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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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 : August 29, 2014

Prairie Island 2

3Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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*)

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: FIN Finding

Outside Lift System (OLS) Girder Failure to Meet American Institute of Steel Construction (AISC) Requirements

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to meet the requirements of the American Institute of Steel Construction (AISC) specification. Specifically, the licensee did not use the specified minimum yield strength of the outside lift system (OLS) girder material to establish an appropriate

factor of safety to qualify the allowable loads that can be safely handled by the OLS girder. The AISC factor of safety to failure ensured the OLS girder would maintain structural integrity (no permanent deformation or structural failure) when subjected to the applied loads (lifted load, wind load, design basis earthquake load). This issue was entered into the licensee's Corrective Action Program (CAP) as CAP 1404203, "OLS calculation used actual material strength rather than ASTM." The licensee performed a functionality assessment to demonstrate that there was reasonable assurance the OLS girder remained capable of performing its intended design functions.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the load handling reliability of the OLS girder inherently decreased when the AISC requirements were not met. The inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 -- Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown (defueled) conditions, the inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs and BWRs," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance. No violation of regulatory requirements is associated with this finding. The inspectors identified that there was a Human Performance, Design Margin (H.6) cross-cutting aspect associated with this finding for the licensee failure to ensure the OLS girder reflected the intended design margins.

Inspection Report# : [2013011](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  May 02, 2014

Identified By: NRC

Item Type: NCV NonCited 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)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: FIN Finding

FAILURE TO EVALUATE CORROSIVE EFFECTS OF BORIC ACID ON THE 22 RESIDUAL HEAT REMOVAL PUMP.

The inspectors identified a finding of very low safety significance on October 7, 2013, due to the failure to perform an adequate boric acid evaluation in accordance with Procedure H2, "Boric Acid Corrosion Control Program." Specifically, the licensee failed to properly evaluate the impact of a boric acid leak following the leak coming into contact with carbon steel components on the 22 residual heat removal pump casing. Corrective actions included moving a carbon steel bolt for visual inspection and completing a technically adequate boric acid corrosion evaluation.

The inspectors determined that this issue was more than minor because if left uncorrected the failure to complete technically adequate boric acid corrosion evaluations could result in components with questionable structural integrity being left in service. The inspectors determined that this issue was of very low safety significance because each of the questions provided in IMC 0609, Attachment 0609.04, Appendix A, Exhibit 2, were answered "no." The inspectors concluded that this issue was cross-cutting in the Human Performance, Decision Making area because the licensee failed to use conservative assumptions while determining the applicability of a previously completed boric acid evaluation to a current plant condition. No violation was identified since all NRC requirements were met (H.1(b)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH APPROPRIATE DESIGN CONTROL MEASURES FOR SELECTION OF REPLACEMENT PARTS.

The inspectors identified a finding of very low safety significance and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," on October 8, 2013, due to the failure to establish measures for the selection of parts that are essential to the safety-related functions of structures, systems, or components (SSCs). Specifically, the licensee failed to properly evaluate the specifications and quality of replacement parts such as gaskets, o-rings, packing materials, and diaphragms to ensure that these parts were suitable for installation in safety-related systems. As a result, multiple systems were required to be declared operable but non-conforming. Corrective actions for this issue included ensuring personnel understood the requirements regarding parts selection,

2

determining the correct parts to be used and initiating work orders to ensure that parts were replaced in the future if required.

The inspectors determined that this issue was more than minor because if left uncorrected, the installation of parts/materials which failed to meet requirements could lead to subsequent part failure. This failure would adversely impact the ability of safety-related equipment to perform its safety function. The inspectors determined that this issue was of very low safety significance because Question 1 in IMC 0609, Attachment 0609.04, Attachment A, Exhibit 2, was answered "yes." The inspectors concluded that this issue was cross-cutting in the Human Performance, Resources area because the licensee's parts specification and quality level documentation was not complete, accurate and/or up to date (H.2(c)).

Inspection Report# : [2013005](#) (*pdf*)

Significance:  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 remain invalid 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)

Barrier Integrity

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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 caused 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:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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)

Significance:  Jan 16, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Blowdown (SGBD) Pipe Support Anchorages Failure to Meet Design Requirements

The inspectors identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for the failure to provide adequate design control measures for the steam generator blowdown (SGBD) pipe supports 8D-2SGB-1A, 2-RBDH-5294, 2-RBDH-606, 2 RBDH-363, 2-RBDH-350, 2-RBDH-349, 2-RBDH-339, and 2-RBDH-358. Specifically the SGBD pipe supports design was non-conservative with respect to Class I requirements as defined in Updated Safety Analysis Report (USAR) Section 12, "Plant Structures and Shielding", and referenced specifications. The licensee documented the violation in its CAP as CAPs 1405404 and 1412225 and performed an evaluation to demonstrate that there was reasonable assurance that the SGBD pipe supports remained capable of performing their safety functions.

The inspectors determined the finding was more than minor because the finding adversely affected the barrier integrity cornerstone and the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's calculations were not sufficient to demonstrate that the pipe supports were capable of properly supporting SGBD piping and isolation valves during design basis events, and hence ensure containment integrity. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, "The Significance Determination Process (SDP) for Findings At-Power," Appendix A, Exhibit 3 (Section B). The inspectors determined that this finding was very low safety significance (Green) because each of the screening questions was answered "no." Specifically, the SGBD pipe supports were subsequently determined to be capable of performing their safety function. The inspectors identified a Human Performance, Documentation (H.7) cross-cutting aspect associated with this finding for the licensee's failure to ensure complete, accurate, and, up-to-date design documentation. Specifically, the licensee failed to provide adequate oversight of design calculations and documentation of as-built conditions during the SGBD pipe support re-

analysis conducted to support the steam generators replacement.

Inspection Report# : [2013011](#) (*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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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 : November 26, 2014

Prairie Island 2

4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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*)

Significance: G Jan 16, 2014

Identified By: NRC

Item Type: FIN Finding

Outside Lift System (OLS) Girder Failure to Meet American Institute of Steel Construction (AISC) Requirements

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to meet the requirements of the American Institute of Steel Construction (AISC) specification. Specifically, the licensee did not use the specified minimum yield strength of the outside lift system (OLS) girder material to establish an appropriate

factor of safety to qualify the allowable loads that can be safely handled by the OLS girder. The AISC factor of safety to failure ensured the OLS girder would maintain structural integrity (no permanent deformation or structural failure) when subjected to the applied loads (lifted load, wind load, design basis earthquake load). This issue was entered into the licensee's Corrective Action Program (CAP) as CAP 1404203, "OLS calculation used actual material strength rather than ASTM." The licensee performed a functionality assessment to demonstrate that there was reasonable assurance the OLS girder remained capable of performing its intended design functions.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, the load handling reliability of the OLS girder inherently decreased when the AISC requirements were not met. The inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 -- Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown (defueled) conditions, the inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs and BWRs," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance. No violation of regulatory requirements is associated with this finding. The inspectors identified that there was a Human Performance, Design Margin (H.6) cross-cutting aspect associated with this finding for the licensee failure to ensure the OLS girder reflected the intended design margins.

Inspection Report# : [2013011](#) (pdf)

Mitigating Systems

Significance:  Dec 31, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  May 02, 2014

Identified By: NRC

Item Type: NCV NonCited 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)

Significance:  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 remain invalid 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)

Barrier Integrity

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited 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*)

Significance:  Jan 16, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Blowdown (SGBD) Pipe Support Anchorages Failure to Meet Design Requirements

The inspectors identified a finding of very low safety significance and associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, “Design Control,” for the failure to provide adequate design control measures for the steam generator blowdown (SGBD) pipe supports 8D-2SGB-1A, 2-RBDH-5294, 2-RBDH-606, 2 RBDH-363, 2-RBDH-350, 2-RBDH-349, 2-RBDH-339, and 2-RBDH-358. Specifically the SGBD pipe supports design was non-conservative with respect to Class I requirements as defined in Updated Safety Analysis Report (USAR) Section 12, “Plant Structures and Shielding”, and referenced specifications. The licensee documented the violation in its CAP as CAPs 1405404 and 1412225 and performed an evaluation to demonstrate that there was reasonable assurance that the SGBD pipe supports remained capable of performing their safety functions.

The inspectors determined the finding was more than minor because the finding adversely affected the barrier integrity cornerstone and the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee’s calculations were not sufficient to demonstrate that the pipe supports were capable of properly supporting SGBD piping and isolation valves during design basis events, and hence ensure containment integrity. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, “The Significance Determination Process (SDP) for Findings At-Power,” Appendix A, Exhibit 3 (Section B). The inspectors determined that this finding was very low safety significance (Green) because each of the screening questions was answered “no.” Specifically, the SGBD pipe supports were subsequently determined to be capable of performing their safety function. The inspectors identified a Human Performance, Documentation (H.7) cross-cutting aspect associated with this finding for the licensee’s failure to ensure complete, accurate, and, up-to-date design documentation. Specifically, the licensee failed to provide adequate oversight of design calculations and documentation of as-built conditions during the SGBD pipe support re-analysis conducted to support the steam generators replacement.

Inspection Report# : [2013011](#) (*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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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:  Jun 27, 2014

Identified By: NRC

Item Type: NCV NonCited 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 : February 26, 2015

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:  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:  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:  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:  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:  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:  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:  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:  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:  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:  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

Prairie Island 2 2Q/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 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:  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*)

Barrier Integrity

Significance:  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

Last modified : August 07, 2015

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:  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:  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:  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:  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:  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

Prairie Island 2

4Q/2015 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet ANSI N14.6 Section 5.3.1 Requirements

Green. Inspectors identified a finding of very low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations, Part 50, Appendix B, Criteria III, "Design Control," for the licensee's failure to incorporate the American National Standards Institute (ANSI) N14.6-1978, Section 5.3.1 required testing frequency on the reactor vessel head and reactor vessel internals lifting devices into the controlling preventive maintenance procedure. Compliance with the ANSI standard was documented in the safety evaluation report for the licensee's control of heavy loads.

The inspectors determined the licensee's failure to comply with ANSI N14.6-1978, Section 5.3.1, for the continuing use testing of special lifting devices was a performance deficiency (PD). The PD was determined to be more-than-minor and a finding because the PD was associated with the Initiating Events Cornerstone attribute of design control, and adversely affected the cornerstone objective to limit the likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown, as well as power operations. Specifically, compliance with ANSI N14.6 1978, Section 5.3.1, is to ensure safe load handling of heavy loads over the reactor core, and/or over safety-related systems through establishing testing for the continued functionality of the special lifting devices. The failure to perform the required frequency of testing on special lifting devices would increase the likelihood of a load drop and would decrease the load handling reliability of the lifting device in that lifting device could be returned to service with potentially unacceptable flaws. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown conditions, the inspectors used Inspection Manual Chapter 0609, Appendix G, and "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs [Pressurized Water Reactors] and BWRs [Boiling Water Reactors]," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Resources, for the licensee's failure to ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the licensee staff evaluated NRC Information Notice (IN) 2014-12, "Crane and Heavy Lift Issues Identified during NRC Inspections," in corrective action program (CAP) document 01457469. However, in CAP 01457469, the licensee concluded that issues identified in IN 2014-12 related to other licensees not performing testing in accordance with ANSI N14.6 requirements was not applicable to the licensee at the Prairie Island Nuclear Generating Plant site. Therefore, the inspectors determined that there was a recent missed opportunity for the licensee to have reasonably identified that the current preventive maintenance procedure for special lifting devices (PM 3560-52) was not in accordance with the ANSI N14.6-1978 requirements as referenced in the Safety Evaluation Report. [H.1]

Inspection Report# : [2015004](#) (pdf)

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 Nov 24, 2015

Identified By: NRC

Item Type: VIO Violation

Failure to Correct an NCV Associated with Inadequate Gas Monitoring of Inaccessible RHR Gas Susceptible Locations (Section 40A2.1.c(1))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to correct a condition adverse to quality (CAQ). Specifically, on August 1, 2011, the NRC issued an NCV for the failure to monitor five safety-related gas susceptible locations considered to be inaccessible, which is a CAQ. As of November 24, 2015, the licensee had not corrected this CAQ for two of those locations and did not have plans to restore compliance. The licensee captured this issue into their Corrective Action Program (CAP) with a proposed corrective action to develop an alternative monitoring method for these locations when the unit is operating.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee was able to access and inspect these locations during the refueling outage that was ongoing when this issue was identified and confirmed that they were full of water during the previous operating cycle. In addition, a historical review did not find information that

challenged operability due to gas accumulation at these locations. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate their discovery that the CAQ was not been corrected on July 29, 2013. Specifically, on 2013, the licensee initiated a condition evaluation (CE) to determine if the action plan at the time addressed the NCV associated with the CAQ. However, the CE was closed by crediting actions that were similar to those that resulted in the NCV and other documented observations associated with the inappropriate resolution of the issue. [P.2] (Section 40A2.1.c(1))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Gas Accumulation at the RHR Train Credited for Emergency Core Cooling in MODE 4 (Section 40A2.1.c(2))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to manage gas accumulation at the residual heat removal (RHR) train credited for emergency core cooling in MODE 4, "Hot Shutdown." Specifically, the RHR train credited for emergency core cooling in MODE 4 was not verified to be full of water before its operability was required in MODE 4 following system draining during refueling outage 1R29. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to explicitly require these inspections prior to transitioning into MODE 4 during startup activities.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed records associated with gas accumulation management activities during 1R29 and discovered that a non-conforming void was vented 12 – 18 hours after the transition to MODE 4. However, an operability review reasonably determined that this non conforming condition did not result in loss of operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(2))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish Procedures to Verify RHR is Full of Water Following Maintenance Outages (Section 40A2.1.c(3))

Green. A finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed for the licensee's failure to establish procedures to verify RHR is operable with respect to gas accumulation following maintenance outages. Specifically, procedures were not established to verify the system is sufficiently full of water when RHR is secured in its standby emergency core cooling system mode of operation during startup activities following maintenance outages. The licensee captured this issue into their CAP. As a long term corrective action, the licensee revised procedures to require gas accumulation inspections of the affected gas susceptible locations as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable

consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at the RHR piping after maintenance outages and reasonably concluded that the system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(3))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Potential Gas Accumulation Due to SI Isolation Check Valve Leakage Following Maintenance Outages (Section 40A2.1.c(4))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to manage potential gas accumulation due to safety injection isolation check valve leakage following maintenance outages. Specifically, the licensee did not evaluate the potential to accumulate nitrogen at multiple RHR and safety injection gas susceptible locations due to safety injection check valve unseating caused by maintenance outages. As a result, the station did not manage this gas intrusion mechanism. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to verify that the safety injection check valves are seated as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at one of the affected piping locations and reasonably concluded that the associated system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(4))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify a Continuous Gas Intrusion into RHR (Section 40A2.1.c(5))

Green. 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," for the licensee's failure to identify a continuous gas intrusion into one train of RHR, which was a CAQ, resulting in a continuous undetected void growth that exceeded the applicable operability limits. The licensee did not consider applicable active gas intrusion mechanisms when evaluating the discovery of a void at the RHR piping. The licensee captured this issue into their CAP and stopped the continuous gas intrusion into the affected piping location.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the void and reasonably concluded that the system remained operable. The inspectors determined that this finding had a cross cutting aspect in the area of human performance because the licensee did not recognize and plan for the

possibility of mistakes when evaluating the gas surveillance results of February 10, 2015. Specifically, the licensee did not plan for the possibility that the unacceptable results were indicative of a different problem than originally determined or a combination of problems. As a result, the licensee failed to identify the continuous gas intrusion incident. [H.12] (Section 40A2.1.c(5))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  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:  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:  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:  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)

Barrier Integrity

Significance:  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

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Adequately Calibrate Liquid Effluent Monitors

Green. The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of TS 5.5.1.a for the failure to comply with the Offsite Dose Calculation Manual (ODCM) for not using calibration sources which were traceable to the National Institute of Standards and Technology (NIST) or equivalent during the calibration of station effluent monitors. The licensee entered the issues into the corrective action program (CAP) as CAPs 01490581 and 01500149. Immediate corrective actions included the re-calibration of impacted monitors and the performance of an extent of condition to evaluate other radiation monitor calibrations.

The performance deficiency was determined to be of more than minor safety significance in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the cornerstone of Public Radiation Safety and it adversely impacted the objective of ensuring adequate protection of public health and safety due to failure to properly calibrate certain effluent monitors. Subsequent calibration of the monitors determined that the monitor efficiency was previously overstated. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009, but did not identify any similar examples. The finding was assessed using IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," dated, February 12, 2008, and determined to be of very low safety significance (Green), because it was associated with the effluent release program but was not a failure to implement an effluent program, public dose did not exceed Appendix I criteria and the limits in Title 10 of the Code of Federal Regulations 20.1301(e) were not exceeded. A cross-cutting aspect was not assigned as this issue occurred numerous years ago. The station has since performed monitor calibration(s) with radioactive sources with known quality.

Inspection Report# : [2015004](#) (*pdf*)

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 : March 02, 2016

Prairie Island 2

1Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet ANSI N14.6 Section 5.3.1 Requirements

Green. Inspectors identified a finding of very low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations, Part 50, Appendix B, Criteria III, "Design Control," for the licensee's failure to incorporate the American National Standards Institute (ANSI) N14.6-1978, Section 5.3.1 required testing frequency on the reactor vessel head and reactor vessel internals lifting devices into the controlling preventive maintenance procedure. Compliance with the ANSI standard was documented in the safety evaluation report for the licensee's control of heavy loads.

The inspectors determined the licensee's failure to comply with ANSI N14.6-1978, Section 5.3.1, for the continuing use testing of special lifting devices was a performance deficiency (PD). The PD was determined to be more-than-minor and a finding because the PD was associated with the Initiating Events Cornerstone attribute of design control, and adversely affected the cornerstone objective to limit the likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown, as well as power operations. Specifically, compliance with ANSI N14.6 1978, Section 5.3.1, is to ensure safe load handling of heavy loads over the reactor core, and/or over safety-related systems through establishing testing for the continued functionality of the special lifting devices. The failure to perform the required frequency of testing on special lifting devices would increase the likelihood of a load drop and would decrease the load handling reliability of the lifting device in that lifting device could be returned to service with potentially unacceptable flaws. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown conditions, the inspectors used Inspection Manual Chapter 0609, Appendix G, and "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs [Pressurized Water Reactors] and BWRs [Boiling Water Reactors]," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Resources, for the licensee's failure to ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the licensee staff evaluated NRC Information Notice (IN) 2014-12, "Crane and Heavy Lift Issues Identified during NRC Inspections," in corrective action program (CAP) document 01457469. However, in CAP 01457469, the licensee concluded that issues identified in IN 2014-12 related to other licensees not performing testing in accordance with ANSI N14.6 requirements was not applicable to the licensee at the Prairie Island Nuclear Generating Plant site. Therefore, the inspectors determined that there was a recent missed opportunity for the licensee to have reasonably identified that the current preventive maintenance procedure for special lifting devices (PM 3560-52) was not in accordance with the ANSI N14.6-1978 requirements as referenced in the Safety Evaluation Report. [H.1]

Inspection Report# : [2015004](#) (pdf)

Mitigating Systems

Significance:  Feb 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Cold Shutdown Repair Procedure (Section 1R05.9b)

The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made in the plant that resulted in the licensee not being able to perform the procedure as written. The licensee entered the issue into their Corrective Action Program, and planned to update drawings and label components in the field and include the proper tools to accomplish the actions specified in the procedure.

The inspectors determined that the performance deficiency was more than minor because the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown. The finding was of very low safety significance because it did not impact the licensee's ability to reach hot shutdown. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance. (Section 1R05.9b)

Inspection Report# : [2016008](#) (*pdf*)

Significance:  Feb 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Extensive Damage Mitigating Strategies (Section 1R05.1b)

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10 of the Code of Federal Regulations Part 50.54(hh)(2) for the licensee's failure to implement and maintain procedures to address a postulated loss of large areas of the plant due to explosions or fire. Specifically, the licensee failed to maintain procedures necessary to depressurize the reactor coolant system using the pressurizer power operated relief valves. The licensee entered the issue into their Corrective Action Program to revise the procedure.

The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of procedure quality, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent core damage. Specifically, the failure to maintain Extensive Damage Mitigating Guideline-2 as a result of a modification to the components would affect the capability to respond to a postulated loss of large areas of the plant due to explosions or fire. The finding was of very-low safety significance because it did not result in a substantial inability to perform Mitigating Strategies. This finding has a cross-cutting aspect in the area of human performance associated with change management because the licensee failed to update the procedures as a result of a modification to the system required for implementing their B.5.b strategies. [H.3] (Section 1R05.1b)

Inspection Report# : [2016008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: VIO Violation

Failure to Correct an NCV Associated with Inadequate Gas Monitoring of Inaccessible RHR Gas Susceptible Locations (Section 40A2.1.c(1))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to correct a condition adverse to quality (CAQ). Specifically, on August 1, 2011, the NRC issued an NCV for the failure to monitor five safety-related gas susceptible locations considered to be inaccessible, which is a CAQ. As of November 24, 2015, the licensee had not corrected this CAQ for two of those locations and did not have plans to restore compliance. The licensee captured this issue into their Corrective Action Program (CAP) with a proposed corrective action to develop an alternative monitoring method for these locations when the unit is operating.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee was able to access and inspect these locations during the refueling outage that was ongoing when this issue was identified and confirmed that they were full of water during the previous operating cycle. In addition, a historical review did not find information that challenged operability due to gas accumulation at these locations. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate their discovery that the CAQ was not been corrected on July 29, 2013. Specifically, on 2013, the licensee initiated a condition evaluation (CE) to determine if the action plan at the time addressed the NCV associated with the CAQ. However, the CE was closed by crediting actions that were similar to those that resulted in the NCV and other documented observations associated with the inappropriate resolution of the issue. [P.2] (Section 40A2.1.c(1))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Gas Accumulation at the RHR Train Credited for Emergency Core Cooling in MODE 4 (Section 40A2.1.c(2))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to manage gas accumulation at the residual heat removal (RHR) train credited for emergency core cooling in MODE 4, "Hot Shutdown." Specifically, the RHR train credited for emergency core cooling in MODE 4 was not verified to be full of water before its operability was required in MODE 4 following system draining during refueling outage 1R29. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to explicitly require these inspections prior to transitioning into MODE 4 during startup activities.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed records associated with gas accumulation management activities during 1R29 and discovered that a non-conforming void was vented 12 – 18 hours after the transition to MODE 4. However, an operability review reasonably determined that this non conforming condition did not result in loss of operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(2))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish Procedures to Verify RHR is Full of Water Following Maintenance Outages (Section 40A2.1.c(3))

Green. A finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed for the licensee's failure to establish procedures to verify RHR is operable with respect to gas accumulation following maintenance outages. Specifically, procedures were not established to verify the system is sufficiently full of water when RHR is secured in its standby emergency core cooling system mode of operation during startup activities following maintenance outages. The licensee captured this issue into their CAP. As a long term corrective action, the licensee revised procedures to require gas accumulation inspections of the affected gas susceptible locations as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at the RHR piping after maintenance outages and reasonably concluded that the system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(3))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Potential Gas Accumulation Due to SI Isolation Check Valve Leakage Following Maintenance Outages (Section 40A2.1.c(4))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to manage potential gas accumulation due to safety injection isolation check valve leakage following maintenance outages. Specifically, the licensee did not evaluate the potential to accumulate nitrogen at multiple RHR and safety injection gas susceptible locations due to safety injection check valve unseating caused by maintenance outages. As a result, the station did not manage this gas intrusion mechanism. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to verify that the safety injection check valves are seated as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at one of the affected piping locations and reasonably concluded that the associated system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(4))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify a Continuous Gas Intrusion into RHR (Section 40A2.1.c(5))

Green. 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," for the licensee's failure to identify a continuous gas intrusion into one train of RHR, which was a CAQ, resulting in a continuous undetected void growth that exceeded the applicable operability limits. The licensee did not consider applicable active gas intrusion mechanisms when evaluating the discovery of a void at the RHR piping. The licensee captured this issue into their CAP and stopped the continuous gas intrusion into the affected piping location.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the void and reasonably concluded that the system remained operable. The inspectors determined that this finding had a cross cutting aspect in the area of human performance because the licensee did not recognize and plan for the possibility of mistakes when evaluating the gas surveillance results of February 10, 2015. Specifically, the licensee did not plan for the possibility that the unacceptable results were indicative of a different problem than originally determined or a combination of problems. As a result, the licensee failed to identify the continuous gas intrusion incident. [H.12] (Section 40A2.1.c(5))

Inspection Report# : [2015008](#) (pdf)

Significance:  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:  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:  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:  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*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Adequately Calibrate Liquid Effluent Monitors

Green. The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of TS 5.5.1.a for the failure to comply with the Offsite Dose Calculation Manual (ODCM) for not using calibration sources which were traceable to the National Institute of Standards and Technology (NIST) or equivalent during the calibration of station effluent monitors. The licensee entered the issues into the corrective action program (CAP) as CAPs 01490581 and 01500149. Immediate corrective actions included the re-calibration of impacted monitors and the performance of an extent of condition to evaluate other radiation monitor calibrations.

The performance deficiency was determined to be of more than minor safety significance in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the cornerstone of Public Radiation Safety and it adversely impacted the objective of ensuring adequate protection of public health and safety due to failure to properly calibrate certain effluent monitors. Subsequent calibration of the monitors determined that the monitor efficiency was previously overstated. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009, but did not identify any similar examples. The finding was assessed using IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," dated, February 12, 2008, and determined to be of very low safety significance (Green), because it was associated with the effluent release program but was not a failure to implement an effluent program, public dose did not exceed Appendix I criteria and the limits in Title 10 of the Code of Federal Regulations 20.1301(e) were not exceeded. A cross-cutting aspect was not assigned as this issue occurred numerous years ago. The station has since performed monitor calibration(s) with radioactive sources with known quality.

Inspection Report# : [2015004](#) (*pdf*)

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 : July 11, 2016

Prairie Island 2

2Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet ANSI N14.6 Section 5.3.1 Requirements

Green. Inspectors identified a finding of very low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations, Part 50, Appendix B, Criteria III, "Design Control," for the licensee's failure to incorporate the American National Standards Institute (ANSI) N14.6-1978, Section 5.3.1 required testing frequency on the reactor vessel head and reactor vessel internals lifting devices into the controlling preventive maintenance procedure. Compliance with the ANSI standard was documented in the safety evaluation report for the licensee's control of heavy loads.

The inspectors determined the licensee's failure to comply with ANSI N14.6-1978, Section 5.3.1, for the continuing use testing of special lifting devices was a performance deficiency (PD). The PD was determined to be more-than-minor and a finding because the PD was associated with the Initiating Events Cornerstone attribute of design control, and adversely affected the cornerstone objective to limit the likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown, as well as power operations. Specifically, compliance with ANSI N14.6 1978, Section 5.3.1, is to ensure safe load handling of heavy loads over the reactor core, and/or over safety-related systems through establishing testing for the continued functionality of the special lifting devices. The failure to perform the required frequency of testing on special lifting devices would increase the likelihood of a load drop and would decrease the load handling reliability of the lifting device in that lifting device could be returned to service with potentially unacceptable flaws. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown conditions, the inspectors used Inspection Manual Chapter 0609, Appendix G, and "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs [Pressurized Water Reactors] and BWRs [Boiling Water Reactors]," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Resources, for the licensee's failure to ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the licensee staff evaluated NRC Information Notice (IN) 2014-12, "Crane and Heavy Lift Issues Identified during NRC Inspections," in corrective action program (CAP) document 01457469. However, in CAP 01457469, the licensee concluded that issues identified in IN 2014-12 related to other licensees not performing testing in accordance with ANSI N14.6 requirements was not applicable to the licensee at the Prairie Island Nuclear Generating Plant site. Therefore, the inspectors determined that there was a recent missed opportunity for the licensee to have reasonably identified that the current preventive maintenance procedure for special lifting devices (PM 3560-52) was not in accordance with the ANSI N14.6-1978 requirements as referenced in the Safety Evaluation Report. [H.1]

Inspection Report# : [2015004](#) (pdf)

Mitigating Systems

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: FIN Finding

21 safeguards diesel exhaust fan connectors not fully engaged or aligned

A finding of very low safety significance and associated non-cited violation of Technical Specification Section 5.4.1, "Procedures," was identified by the inspectors for the licensee's failure to ensure the 21 safeguards diesel exhaust fan main contact connectors were fully engaged and aligned as required per electrical maintenance procedures to ensure proper operation of the breaker. As part of their corrective actions, the licensee aligned and re-engaged the main contact connectors as necessary. In addition, the licensee ensured maintenance personnel were aware of the operating experience to prevent the same issue from occurring in the future. The violation was entered into the licensee's corrective action program as Action Request 1525844.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone and the breaker failure led to the inoperability of the 21 safeguards diesel exhaust fan and impacted the availability of the 22 cooling water system diesel driven pump. This finding represented a loss of the 22 safeguards diesel cooling water pump function for longer than the Technical Specification allowed

3
outage time of 7 days and therefore required a detailed risk evaluation. The regional senior reactor analyst performed a detailed risk evaluation of this finding using the Prairie Island Standardized Plant Analysis Risk Model revision 8.19 and determined the finding was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because it was not indicative of current performance.

Inspection Report# : [2016007](#) (*pdf*)

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: FIN Finding

Failure to perform required operability evaluations

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," Revisions 14 and 15. Specifically, on two occasions, the licensee failed to properly evaluate potential operability concerns associated with the Unit 2 emergency diesel generator (EDG) day tanks and the Unit 2 train 'A' cooling water (CL) system piping. The licensee entered the issues into the Corrective Action Program as Action Requests 1525842 and 1526070

The inspectors determined that the licensee's failure to accomplish the requirements of procedure FP-OP-OL-01, "Operability/Functionality Determination," Revisions 14 and 15, to properly evaluate the operability issues associated with the Unit 2 EDG day tank fuel oil level and the Unit 2 CL system piping (both safety-related, mitigating systems) was a performance deficiency. The performance deficiency, with two examples, was determined to be more than minor in accordance with Inspection Manual Chapter

(IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," it was associated with the Mitigating Systems Cornerstone attributes of Equipment Performance (for the Unit 2 EDGs) and Protection against External Factors (for the Unit 2 CL piping) 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," and determined that the finding screened as very low safety significance (Green) since the inspectors answered "Yes" to Question 1 of Section A of Exhibit 2, "Mitigating Systems Screening Questions." The inspectors concluded that this issue was cross-cutting in the area of Problem Identification and Resolution in the aspect of Evaluation. As defined in IMC 0310, "Aspects Within the Cross-Cutting Areas," this aspect states, "The organization thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance." Specifically, the licensee had not thoroughly evaluated the operability issues associated with the Unit 2 EDG day tank levels and the Unit 2 CL piping structural integrity. [P.2](Section 40A2.1.b(2)(B))
Inspection Report# : [2016007](#) (pdf)

Significance:  Feb 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Cold Shutdown Repair Procedure (Section 1R05.9b)

The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made in the plant that resulted in the licensee not being able to perform the procedure as written. The licensee entered the issue into their Corrective Action Program, and planned to update drawings and label components in the field and include the proper tools to accomplish the actions specified in the procedure.

The inspectors determined that the performance deficiency was more than minor because the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown. The finding was of very low safety significance because it did not impact the licensee's ability to reach hot shutdown. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance. (Section 1R05.9b)

Inspection Report# : [2016008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: VIO Violation

Failure to Correct an NCV Associated with Inadequate Gas Monitoring of Inaccessible RHR Gas Susceptible Locations (Section 40A2.1.c(1))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to correct a condition adverse to quality (CAQ). Specifically, on August 1, 2011, the NRC issued an NCV for the failure to monitor five safety-related gas susceptible locations considered to be inaccessible, which is a CAQ. As of November 24, 2015, the licensee had not corrected this CAQ for two of those locations and did not have plans to restore compliance. The licensee captured this issue into their Corrective Action Program (CAP) with a proposed

corrective action to develop an alternative monitoring method for these locations when the unit is operating.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee was able to access and inspect these locations during the refueling outage that was ongoing when this issue was identified and confirmed that they were full of water during the previous operating cycle. In addition, a historical review did not find information that challenged operability due to gas accumulation at these locations. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate their discovery that the CAQ was not been corrected on July 29, 2013. Specifically, on 2013, the licensee initiated a condition evaluation (CE) to determine if the action plan at the time addressed the NCV associated with the CAQ. However, the CE was closed by crediting actions that were similar to those that resulted in the NCV and other documented observations associated with the inappropriate resolution of the issue. [P.2] (Section 40A2.1.c(1))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Gas Accumulation at the RHR Train Credited for Emergency Core Cooling in MODE 4 (Section 40A2.1.c(2))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to manage gas accumulation at the residual heat removal (RHR) train credited for emergency core cooling in MODE 4, “Hot Shutdown.” Specifically, the RHR train credited for emergency core cooling in MODE 4 was not verified to be full of water before its operability was required in MODE 4 following system draining during refueling outage 1R29. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to explicitly require these inspections prior to transitioning into MODE 4 during startup activities.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed records associated with gas accumulation management activities during 1R29 and discovered that a non-conforming void was vented 12 – 18 hours after the transition to MODE 4. However, an operability review reasonably determined that this non conforming condition did not result in loss of operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(2))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish Procedures to Verify RHR is Full of Water Following Maintenance Outages (Section 40A2.1.c(3))

Green. A finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self revealed for the licensee’s failure to establish

procedures to verify RHR is operable with respect to gas accumulation following maintenance outages. Specifically, procedures were not established to verify the system is sufficiently full of water when RHR is secured in its standby emergency core cooling system mode of operation during startup activities following maintenance outages. The licensee captured this issue into their CAP. As a long term corrective action, the licensee revised procedures to require gas accumulation inspections of the affected gas susceptible locations as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at the RHR piping after maintenance outages and reasonably concluded that the system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(3))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Potential Gas Accumulation Due to SI Isolation Check Valve Leakage Following Maintenance Outages (Section 40A2.1.c(4))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to manage potential gas accumulation due to safety injection isolation check valve leakage following maintenance outages. Specifically, the licensee did not evaluate the potential to accumulate nitrogen at multiple RHR and safety injection gas susceptible locations due to safety injection check valve unseating caused by maintenance outages. As a result, the station did not manage this gas intrusion mechanism. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to verify that the safety injection check valves are seated as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at one of the affected piping locations and reasonably concluded that the associated system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(4))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify a Continuous Gas Intrusion into RHR (Section 40A2.1.c(5))

Green. 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," for the licensee's failure to identify a continuous gas intrusion into one train of RHR, which was a CAQ, resulting in a continuous undetected void growth that exceeded the applicable operability limits. The licensee did not consider applicable active gas intrusion mechanisms when

evaluating the discovery of a void at the RHR piping. The licensee captured this issue into their CAP and stopped the continuous gas intrusion into the affected piping location.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the void and reasonably concluded that the system remained operable. The inspectors determined that this finding had a cross cutting aspect in the area of human performance because the licensee did not recognize and plan for the possibility of mistakes when evaluating the gas surveillance results of February 10, 2015. Specifically, the licensee did not plan for the possibility that the unacceptable results were indicative of a different problem than originally determined or a combination of problems. As a result, the licensee failed to identify the continuous gas intrusion incident. [H.12] (Section 40A2.1.c(5))

Inspection Report# : [2015008](#) (pdf)

Significance:  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:  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:  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:  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*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Adequately Calibrate Liquid Effluent Monitors

Green. The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of TS 5.5.1.a for the failure to comply with the Offsite Dose Calculation Manual (ODCM) for not using calibration sources which were traceable to the National Institute of Standards and Technology (NIST) or equivalent during the calibration of station effluent monitors. The licensee entered the issues into the corrective action program (CAP) as CAPs 01490581 and 01500149. Immediate corrective actions included the re-calibration of impacted

monitors and the performance of an extent of condition to evaluate other radiation monitor calibrations.

The performance deficiency was determined to be of more than minor safety significance in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the cornerstone of Public Radiation Safety and it adversely impacted the objective of ensuring adequate protection of public health and safety due to failure to properly calibrate certain effluent monitors. Subsequent calibration of the monitors determined that the monitor efficiency was previously overstated. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009, but did not identify any similar examples. The finding was assessed using IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," dated, February 12, 2008, and determined to be of very low safety significance (Green), because it was associated with the effluent release program but was not a failure to implement an effluent program, public dose did not exceed Appendix I criteria and the limits in Title 10 of the Code of Federal Regulations 20.1301(e) were not exceeded. A cross-cutting aspect was not assigned as this issue occurred numerous years ago. The station has since performed monitor calibration(s) with radioactive sources with known quality.

Inspection Report# : [2015004](#) (*pdf*)

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 : August 29, 2016

Prairie Island 2

3Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet ANSI N14.6 Section 5.3.1 Requirements

Green. Inspectors identified a finding of very low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations, Part 50, Appendix B, Criteria III, "Design Control," for the licensee's failure to incorporate the American National Standards Institute (ANSI) N14.6-1978, Section 5.3.1 required testing frequency on the reactor vessel head and reactor vessel internals lifting devices into the controlling preventive maintenance procedure. Compliance with the ANSI standard was documented in the safety evaluation report for the licensee's control of heavy loads.

The inspectors determined the licensee's failure to comply with ANSI N14.6-1978, Section 5.3.1, for the continuing use testing of special lifting devices was a performance deficiency (PD). The PD was determined to be more-than-minor and a finding because the PD was associated with the Initiating Events Cornerstone attribute of design control, and adversely affected the cornerstone objective to limit the likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown, as well as power operations. Specifically, compliance with ANSI N14.6 1978, Section 5.3.1, is to ensure safe load handling of heavy loads over the reactor core, and/or over safety-related systems through establishing testing for the continued functionality of the special lifting devices. The failure to perform the required frequency of testing on special lifting devices would increase the likelihood of a load drop and would decrease the load handling reliability of the lifting device in that lifting device could be returned to service with potentially unacceptable flaws. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown conditions, the inspectors used Inspection Manual Chapter 0609, Appendix G, and "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRs [Pressurized Water Reactors] and BWRs [Boiling Water Reactors]," for this finding and no Phase II or Phase III analysis was required. Therefore, the inspectors determined that this finding was of very low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Resources, for the licensee's failure to ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the licensee staff evaluated NRC Information Notice (IN) 2014-12, "Crane and Heavy Lift Issues Identified during NRC Inspections," in corrective action program (CAP) document 01457469. However, in CAP 01457469, the licensee concluded that issues identified in IN 2014-12 related to other licensees not performing testing in accordance with ANSI N14.6 requirements was not applicable to the licensee at the Prairie Island Nuclear Generating Plant site. Therefore, the inspectors determined that there was a recent missed opportunity for the licensee to have reasonably identified that the current preventive maintenance procedure for special lifting devices (PM 3560-52) was not in accordance with the ANSI N14.6-1978 requirements as referenced in the Safety Evaluation Report. [H.1]

Inspection Report# : [2015004](#) (pdf)

Mitigating Systems

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

21 safeguards diesel exhaust fan connectors not fully engaged or aligned

A finding of very low safety significance and associated non-cited violation of Technical Specification Section 5.4.1, "Procedures," was identified by the inspectors for the licensee's failure to ensure the 21 safeguards diesel exhaust fan main contact connectors were fully engaged and aligned as required per electrical maintenance procedures to ensure proper operation of the breaker. As part of their corrective actions, the licensee aligned and re-engaged the main contact connectors as necessary. In addition, the licensee ensured maintenance personnel were aware of the operating experience to prevent the same issue from occurring in the future. The violation was entered into the licensee's corrective action program as Action Request 1525844.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone and the breaker failure led to the inoperability of the 21 safeguards diesel exhaust fan and impacted the availability of the 22 cooling water system diesel driven pump. This finding represented a loss of the 22 safeguards diesel cooling water pump function for longer than the Technical Specification allowed

3
outage time of 7 days and therefore required a detailed risk evaluation. The regional senior reactor analyst performed a detailed risk evaluation of this finding using the Prairie Island Standardized Plant Analysis Risk Model revision 8.19 and determined the finding was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because it was not indicative of current performance.

Inspection Report# : [2016007](#) (*pdf*)

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to perform required operability evaluations

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," Revisions 14 and 15. Specifically, on two occasions, the licensee failed to properly evaluate potential operability concerns associated with the Unit 2 emergency diesel generator (EDG) day tanks and the Unit 2 train 'A' cooling water (CL) system piping. The licensee entered the issues into the Corrective Action Program as Action Requests 1525842 and 1526070

The inspectors determined that the licensee's failure to accomplish the requirements of procedure FP-OP-OL-01, "Operability/Functionality Determination," Revisions 14 and 15, to properly evaluate the operability issues associated with the Unit 2 EDG day tank fuel oil level and the Unit 2 CL system piping (both safety-related, mitigating systems) was a performance deficiency. The performance deficiency, with two examples, was determined to be more than minor in accordance with Inspection Manual Chapter

(IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," it was associated with the Mitigating Systems Cornerstone attributes of Equipment Performance (for the Unit 2 EDGs) and Protection against External Factors (for the Unit 2 CL piping) 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," and determined that the finding screened as very low safety significance (Green) since the inspectors answered "Yes" to Question 1 of Section A of Exhibit 2, "Mitigating Systems Screening Questions." The inspectors concluded that this issue was cross-cutting in the area of Problem Identification and Resolution in the aspect of Evaluation. As defined in IMC 0310, "Aspects Within the Cross-Cutting Areas," this aspect states, "The organization thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance." Specifically, the licensee had not thoroughly evaluated the operability issues associated with the Unit 2 EDG day tank levels and the Unit 2 CL piping structural integrity. [P.2](Section 40A2.1.b(2)(B))
Inspection Report# : [2016007](#) (pdf)

Significance:  Feb 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Cold Shutdown Repair Procedure (Section 1R05.9b)

The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made in the plant that resulted in the licensee not being able to perform the procedure as written. The licensee entered the issue into their Corrective Action Program, and planned to update drawings and label components in the field and include the proper tools to accomplish the actions specified in the procedure.

The inspectors determined that the performance deficiency was more than minor because the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown. The finding was of very low safety significance because it did not impact the licensee's ability to reach hot shutdown. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance. (Section 1R05.9b)

Inspection Report# : [2016008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: VIO Violation

Failure to Correct an NCV Associated with Inadequate Gas Monitoring of Inaccessible RHR Gas Susceptible Locations (Section 40A2.1.c(1))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated cited violation of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to correct a condition adverse to quality (CAQ). Specifically, on August 1, 2011, the NRC issued an NCV for the failure to monitor five safety-related gas susceptible locations considered to be inaccessible, which is a CAQ. As of November 24, 2015, the licensee had not corrected this CAQ for two of those locations and did not have plans to restore compliance. The licensee captured this issue into their Corrective Action Program (CAP) with a proposed

corrective action to develop an alternative monitoring method for these locations when the unit is operating.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee was able to access and inspect these locations during the refueling outage that was ongoing when this issue was identified and confirmed that they were full of water during the previous operating cycle. In addition, a historical review did not find information that challenged operability due to gas accumulation at these locations. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not thoroughly evaluate their discovery that the CAQ was not been corrected on July 29, 2013. Specifically, on 2013, the licensee initiated a condition evaluation (CE) to determine if the action plan at the time addressed the NCV associated with the CAQ. However, the CE was closed by crediting actions that were similar to those that resulted in the NCV and other documented observations associated with the inappropriate resolution of the issue. [P.2] (Section 40A2.1.c(1))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Gas Accumulation at the RHR Train Credited for Emergency Core Cooling in MODE 4 (Section 40A2.1.c(2))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to manage gas accumulation at the residual heat removal (RHR) train credited for emergency core cooling in MODE 4, “Hot Shutdown.” Specifically, the RHR train credited for emergency core cooling in MODE 4 was not verified to be full of water before its operability was required in MODE 4 following system draining during refueling outage 1R29. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to explicitly require these inspections prior to transitioning into MODE 4 during startup activities.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed records associated with gas accumulation management activities during 1R29 and discovered that a non-conforming void was vented 12 – 18 hours after the transition to MODE 4. However, an operability review reasonably determined that this non conforming condition did not result in loss of operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(2))

Inspection Report# : [2015008](#) (pdf)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish Procedures to Verify RHR is Full of Water Following Maintenance Outages (Section 40A2.1.c(3))

Green. A finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self revealed for the licensee’s failure to establish

procedures to verify RHR is operable with respect to gas accumulation following maintenance outages. Specifically, procedures were not established to verify the system is sufficiently full of water when RHR is secured in its standby emergency core cooling system mode of operation during startup activities following maintenance outages. The licensee captured this issue into their CAP. As a long term corrective action, the licensee revised procedures to require gas accumulation inspections of the affected gas susceptible locations as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at the RHR piping after maintenance outages and reasonably concluded that the system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(3))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Manage Potential Gas Accumulation Due to SI Isolation Check Valve Leakage Following Maintenance Outages (Section 40A2.1.c(4))

Green. The inspectors identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to manage potential gas accumulation due to safety injection isolation check valve leakage following maintenance outages. Specifically, the licensee did not evaluate the potential to accumulate nitrogen at multiple RHR and safety injection gas susceptible locations due to safety injection check valve unseating caused by maintenance outages. As a result, the station did not manage this gas intrusion mechanism. The licensee captured this issue into their CAP with a proposed corrective action to revise procedures to verify that the safety injection check valves are seated as part of the unit startup activities following a maintenance outage.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the limiting void found at one of the affected piping locations and reasonably concluded that the associated system remained operable. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance. (Section 40A2.1.c(4))

Inspection Report# : [2015008](#) (*pdf*)

Significance:  Nov 24, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify a Continuous Gas Intrusion into RHR (Section 40A2.1.c(5))

Green. 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," for the licensee's failure to identify a continuous gas intrusion into one train of RHR, which was a CAQ, resulting in a continuous undetected void growth that exceeded the applicable operability limits. The licensee did not consider applicable active gas intrusion mechanisms when

evaluating the discovery of a void at the RHR piping. The licensee captured this issue into their CAP and stopped the continuous gas intrusion into the affected piping location.

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 systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a past operability review of the void and reasonably concluded that the system remained operable. The inspectors determined that this finding had a cross cutting aspect in the area of human performance because the licensee did not recognize and plan for the possibility of mistakes when evaluating the gas surveillance results of February 10, 2015. Specifically, the licensee did not plan for the possibility that the unacceptable results were indicative of a different problem than originally determined or a combination of problems. As a result, the licensee failed to identify the continuous gas intrusion incident. [H.12] (Section 4OA2.1.c(5))

Inspection Report# : [2015008](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Adequately Calibrate Liquid Effluent Monitors

Green. The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation (NCV) of TS 5.5.1.a for the failure to comply with the Offsite Dose Calculation Manual (ODCM) for not using calibration sources which were traceable to the National Institute of Standards and Technology (NIST) or equivalent during the calibration of station effluent monitors. The licensee entered the issues into the corrective action program (CAP) as CAPs 01490581 and 01500149. Immediate corrective actions included the re-calibration of impacted monitors and the performance of an extent of condition to evaluate other radiation monitor calibrations.

The performance deficiency was determined to be of more than minor safety significance in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the cornerstone of Public Radiation Safety and it adversely impacted the objective of ensuring adequate protection of public health and safety due to failure to properly calibrate certain effluent monitors. Subsequent calibration of the monitors determined that the monitor efficiency was previously overstated. The

inspectors also reviewed IMC 0612, Appendix E, “Examples of Minor Issues,” dated August 11, 2009, but did not identify any similar examples. The finding was assessed using IMC 0609, Appendix D, “Public Radiation Safety Significance Determination Process,” dated, February 12, 2008, and determined to be of very low safety significance (Green), because it was associated with the effluent release program but was not a failure to implement an effluent program, public dose did not exceed Appendix I criteria and the limits in Title 10 of the Code of Federal Regulations 20.1301(e) were not exceeded. A cross-cutting aspect was not assigned as this issue occurred numerous years ago. The station has since performed monitor calibration(s) with radioactive sources with known quality.

Inspection Report# : [2015004](#) (*pdf*)

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 : December 08, 2016

Prairie Island 2

4Q/2016 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

21 safeguards diesel exhaust fan connectors not fully engaged or aligned

A finding of very low safety significance and associated non-cited violation of Technical Specification Section 5.4.1, "Procedures," was identified by the inspectors for the licensee's failure to ensure the 21 safeguards diesel exhaust fan main contact connectors were fully engaged and aligned as required per electrical maintenance procedures to ensure proper operation of the breaker. As part of their corrective actions, the licensee aligned and re-engaged the main contact connectors as necessary. In addition, the licensee ensured maintenance personnel were aware of the operating experience to prevent the same issue from occurring in the future. The violation was entered into the licensee's corrective action program as Action Request 1525844.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone and the breaker failure led to the inoperability of the 21 safeguards diesel exhaust fan and impacted the availability of the 22 cooling water system diesel driven pump. This finding represented a loss of the 22 safeguards diesel cooling water pump function for longer than the Technical Specification allowed

3

outage time of 7 days and therefore required a detailed risk evaluation. The regional senior reactor analyst performed a detailed risk evaluation of this finding using the Prairie Island Standardized Plant Analysis Risk Model revision 8.19 and determined the finding was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because it was not indicative of current performance.

Inspection Report# : [2016007](#) (*pdf*)

Significance:  Jun 24, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to perform required operability evaluations

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," Revisions 14 and 15. Specifically, on two

occasions, the licensee failed to properly evaluate potential operability concerns associated with the Unit 2 emergency diesel generator (EDG) day tanks and the Unit 2 train 'A' cooling water (CL) system piping. The licensee entered the issues into the Corrective Action Program as Action Requests 1525842 and 1526070. The inspectors determined that the licensee's failure to accomplish the requirements of procedure FP-OP-OL-01, "Operability/Functionality Determination," Revisions 14 and 15, to properly evaluate the operability issues associated with the Unit 2 EDG day tank fuel oil level and the Unit 2 CL system piping (both safety-related, mitigating systems) was a performance deficiency. The performance deficiency, with two examples, was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," it was associated with the Mitigating Systems Cornerstone attributes of Equipment Performance (for the Unit 2 EDGs) and Protection against External Factors (for the Unit 2 CL piping) 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," and determined that the finding screened as very low safety significance (Green) since the inspectors answered "Yes" to Question 1 of Section A of Exhibit 2, "Mitigating Systems Screening Questions." The inspectors concluded that this issue was cross-cutting in the area of Problem Identification and Resolution in the aspect of Evaluation. As defined in IMC 0310, "Aspects Within the Cross-Cutting Areas," this aspect states, "The organization thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance." Specifically, the licensee had not thoroughly evaluated the operability issues associated with the Unit 2 EDG day tank levels and the Unit 2 CL piping structural integrity. [P.2](Section 4OA2.1.b(2)(B))
Inspection Report# : [2016007](#) (pdf)

Significance:  Feb 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Cold Shutdown Repair Procedure (Section 1R05.9b)

The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made in the plant that resulted in the licensee not being able to perform the procedure as written. The licensee entered the issue into their Corrective Action Program, and planned to update drawings and label components in the field and include the proper tools to accomplish the actions specified in the procedure.

The inspectors determined that the performance deficiency was more than minor because the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown. The finding was of very low safety significance because it did not impact the licensee's ability to reach hot shutdown. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance. (Section 1R05.9b)

Inspection Report# : [2016008](#) (pdf)

Barrier Integrity

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

Last modified : February 01, 2017



Home > Nuclear Reactors > Operating Reactors > Reactor Oversight Process > Plant Summaries > Prairie Island 2 > Quarterly Plant Inspection Findings

Prairie Island 2 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

On this page:

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational Radiation Safety
- Public Radiation Safety
- Security

Initiating Events

Mitigating Systems

Significance: G Dec 24, 2013

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE CHANGES TO NRC APPROVED METHODOLOGY

Severity Level IV/Green. The inspectors identified a Green finding and associated Severity Level IV Violation of 10 CFR 50.59(d)(1), for the licensee's failure to perform a written evaluation which provided the bases for the determination that a change in the NRC-approved Westinghouse methodology referenced in the Updated Safety Analysis Report (USAR) for evaluating the acceptability of reactor pressure vessel internals baffle former bolting distributions did not require a license amendment. This finding was entered into the licensee's CAP as CAP documents 1539487, "Documentation Missing in 50.59 Screening 4443," dated October 26, 2016; 1552331, "BFB Screen Referenced Eval for SER Limitation 4 Non-Existent," dated March 6, 2017; and 1552314, "BFB Screening Lacks Documentation for SER Limitation 3," dated March 6, 2017. The licensee performed an operability determination and determined the baffle bolts were operable. The inspectors reviewed the operability determination and no performance deficiencies were identified in this determination.

The inspectors determined that the licensee's failure to perform a written evaluation, providing the bases for the determination that a change in the NRC-approved Westinghouse methodology for evaluating the acceptability of baffle former bolting distributions did not require a license amendment, was a performance deficiency. This finding was also evaluated using traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, compliance with the NRC-approved methodology of WCAP-15029-P-A ensured the baffle former assembly maintained its structural integrity, avoiding a failure or excessive deflection of the baffle plates, and hence the primary concern of ensuring the emergency core cooling system could continue to perform its design

function of cooling the reactor core. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," for the Mitigating Systems cornerstone. The finding screened as having very-low safety significance (green) because the emergency core cooling system maintained its operability, specifically with respect to performing its safety function of ensuring adequate core cooling. As such, the finding corresponded to a Severity Level IV Violation in accordance with Example 6.1.d.2 of the NRC Enforcement Policy. The inspectors did not identify a cross cutting aspect because the performance deficiency was from 2013, and hence the issue did not represent current performance.

Inspection Report# : 2017001 (*pdf*)

Barrier Integrity
Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : August 03, 2017

Page Last Reviewed/Updated Wednesday, August 10, 2016



Home > Nuclear Reactors > Operating Reactors > Reactor Oversight Process > Plant Summaries > Prairie Island 2 > Quarterly Plant Inspection Findings

Prairie Island 2 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

On this page:

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational Radiation Safety
- Public Radiation Safety
- Security

Initiating Events

Mitigating Systems

Significance: G Dec 24, 2013

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE CHANGES TO NRC APPROVED METHODOLOGY

Severity Level IV/Green. The inspectors identified a Green finding and associated Severity Level IV Violation of 10 CFR 50.59(d)(1), for the licensee's failure to perform a written evaluation which provided the bases for the determination that a change in the NRC-approved Westinghouse methodology referenced in the Updated Safety Analysis Report (USAR) for evaluating the acceptability of reactor pressure vessel internals baffle former bolting distributions did not require a license amendment. This finding was entered into the licensee's CAP as CAP documents 1539487, "Documentation Missing in 50.59 Screening 4443," dated October 26, 2016; 1552331, "BFB Screen Referenced Eval for SER Limitation 4 Non-Existent," dated March 6, 2017; and 1552314, "BFB Screening Lacks Documentation for SER Limitation 3," dated March 6, 2017. The licensee performed an operability determination and determined the baffle bolts were operable. The inspectors reviewed the operability determination and no performance deficiencies were identified in this determination.

The inspectors determined that the licensee's failure to perform a written evaluation, providing the bases for the determination that a change in the NRC-approved Westinghouse methodology for evaluating the acceptability of baffle former bolting distributions did not require a license amendment, was a performance deficiency. This finding was also evaluated using traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, compliance with the NRC-approved methodology of WCAP-15029-P-A ensured the baffle former assembly maintained its structural integrity, avoiding a failure or excessive deflection of the baffle plates, and hence the primary concern of ensuring the emergency core cooling system could continue to perform its design

function of cooling the reactor core. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," for the Mitigating Systems cornerstone. The finding screened as having very-low safety significance (green) because the emergency core cooling system maintained its operability, specifically with respect to performing its safety function of ensuring adequate core cooling. As such, the finding corresponded to a Severity Level IV Violation in accordance with Example 6.1.d.2 of the NRC Enforcement Policy. The inspectors did not identify a cross cutting aspect because the performance deficiency was from 2013, and hence the issue did not represent current performance.

Inspection Report# : 2017001 (*pdf*)

Barrier Integrity
Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance: N/A Mar 20, 2017

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)

Severity Level IV. The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.72(b)(3)(ii)(B) due to the licensee's failure on March 20, 2017, to report an unanalyzed condition within 8 hours of discovery. Specifically, removing the lower latch assembly of a transom above Door 225, a SEB, during maintenance resulted in the inoperability of the Units 1 and 2 safeguards batteries and Auxiliary Feed Water (AFW) systems, and Unit 1 safeguards bus as determined by CAP 1549724.

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

Inspection Report# : 2017002 (*pdf*)

Current data as of : September 05, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017



Home > Nuclear Reactors > Operating Reactors > Reactor Oversight Process > Plant Summaries > Prairie Island 2 > Quarterly Plant Inspection Findings

Prairie Island 2 – Quarterly Plant Inspection Findings

3Q/2017 – Plant Inspection Findings

On this page:

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational Radiation Safety
- Public Radiation Safety
- Security

Initiating Events

Mitigating Systems

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance: N/A Mar 20, 2017

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)

Severity Level IV. The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.72(b)(3)(ii)(B) due to the licensee's failure on March 20, 2017, to report an unanalyzed condition within 8 hours of discovery. Specifically, removing the lower latch assembly of a transom above Door 225, a SEB, during maintenance resulted in the inoperability of the Units 1 and 2 safeguards batteries and Auxiliary Feed Water (AFW) systems, and Unit 1 safeguards

bus as determined by CAP 1549724.

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

Inspection Report# : 2017002 (*pdf*)

Current data as of : November 29, 2017

Page Last Reviewed/Updated Monday, November 06, 2017



Home > Nuclear Reactors > Operating Reactors > Reactor Oversight Process > Plant Summaries > Prairie Island 2 > Quarterly Plant Inspection Findings

Prairie Island 2 – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

On this page:

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational Radiation Safety
- Public Radiation Safety
- Security

Initiating Events

Mitigating Systems

Significance: G Apr 28, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

FAILURE TO EVALUATE CHANGES TO NRC APPROVED METHODOLOGY

Severity Level IV/Green. The inspectors identified a Green finding and associated Severity Level IV Violation of 10 CFR 50.59(d)(1), for the licensee's failure to perform a written evaluation which provided the bases for the determination that a change in the NRC-approved Westinghouse methodology referenced in the Updated Safety Analysis Report (USAR) for evaluating the acceptability of reactor pressure vessel internals baffle former bolting distributions did not require a license amendment. This finding was entered into the licensee's CAP as CAP documents 1539487, "Documentation Missing in 50.59 Screening 4443," dated October 26, 2016; 1552331, "BFB Screen Referenced Eval for SER Limitation 4 Non-Existent," dated March 6, 2017; and 1552314, "BFB Screening Lacks Documentation for SER Limitation 3," dated March 6, 2017. The licensee performed an operability determination and determined the baffle bolts were operable. The inspectors reviewed the operability determination and no performance deficiencies were identified in this determination.

The inspectors determined that the licensee's failure to perform a written evaluation, providing the bases for the determination that a change in the NRC-approved Westinghouse methodology for evaluating the acceptability of baffle former bolting distributions did not require a license amendment, was a performance deficiency. This finding was also evaluated using traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, compliance with the NRC-approved methodology of WCAP-15029-P-A ensured the baffle former assembly maintained its structural integrity, avoiding a failure or excessive deflection of the baffle plates, and hence the primary concern of ensuring the emergency core cooling system could continue to perform its design

function of cooling the reactor core. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," for the Mitigating Systems cornerstone. The finding screened as having very-low safety significance (green) because the emergency core cooling system maintained its operability, specifically with respect to performing its safety function of ensuring adequate core cooling. As such, the finding corresponded to a Severity Level IV Violation in accordance with Example 6.1.d.2 of the NRC Enforcement Policy. The inspectors did not identify a cross cutting aspect because the performance deficiency was from 2013, and hence the issue did not represent current performance.

Inspection Report# : 2017001 (*pdf*)

Barrier Integrity Emergency Preparedness

Significance: **G** Aug 11, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Implement the Emergency Plan

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

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

Inspection Report# : 2017002 (*pdf*)

Occupational Radiation Safety Public Radiation Safety Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous**Significance:** N/A Aug 11, 2017

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)

Severity Level IV. The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.72(b)(3)(ii)(B) due to the licensee's failure on March 20, 2017, to report an unanalyzed condition within 8 hours of discovery. Specifically, removing the lower latch assembly of a transom above Door 225, a SEB, during maintenance resulted in the inoperability of the Units 1 and 2 safeguards batteries and Auxiliary Feed Water (AFW) systems, and Unit 1 safeguards bus as determined by CAP 1549724.

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

Inspection Report# : 2017002 (*pdf*)

Current data as of : February 01, 2018

Page Last Reviewed/Updated Monday, November 06, 2017