

Point Beach 2

3Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action Violation for Untimely Repair of Emergency Diesel Generator Cooling System Endbells With Microbiologically-Induced Corrosion

The inspectors identified a Green finding with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to take adequate corrective action for microbiologically-induced corrosion (MIC) of the endbells of the service water cooling system of the G-01 emergency diesel generator (EDG). Specifically, significant wastage caused by MIC, on the EDG endbells was identified in 2001 and work orders were written to replace the endbells. However, as of March 20, 2005, the endbells were not replaced which resulted in a self-revealed through-wall leak from MIC on an endbell, requiring the diesel to be removed from service to effect repairs. The licensee took immediate corrective actions to replace the endbell, followed by replacement of other susceptible EDG endbells. In addition, the licensee proposed changes to the predictive maintenance program to better identify potential sources of MIC corrosion in service water system components.

The issue was more than minor because the finding was associated with the equipment performance attribute of the Mitigating System 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. In addition, if left uncorrected, the finding could have become a more significant safety concern. The finding was determined to be of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification allowed outage time, and no risk due to external events. The inspectors also determined that a primary cause of this finding was related to the cross-cutting area of problem identification and resolution, because the licensee failed to take adequate corrective actions.

Inspection Report# : [2005010\(pdf\)](#)

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Technical Specification Violation for Inoperable Emergency Diesel Generator Because of Mis-Positioned Room Exhaust Fan Breaker

The inspectors identified a Green finding with an associated Non-Cited Violation of Technical Specification 3.8.1.E for the self-revealed problem on August 7, 2005, when one of the required room exhaust fans for the G-01 EDG failed to start due to a mispositioned breaker. The licensee returned the breaker to the proper position and investigated the cause of the mispositioning. The licensee planned and had taken additional corrective actions to provide clarification for aborting a procedure or scheduled activity and for ensuring equipment was appropriately returned to service.

The finding was more than minor, in that, it was associated with the configuration control attribute of the Mitigating System cornerstone 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 was determined to be of very low safety significance because it did not involve a design deficiency, there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification (TS)-allowed outage time, and no risk due to external events. The inspectors also determined that a primary cause of this finding was related to the cross-cutting area of human performance, because the licensee failed to ensure that the appropriate conditions were established after completion and cancellation of maintenance activities and before re-aligning G-01 to the safeguards bus.

Inspection Report# : [2005010\(pdf\)](#)

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Technical Specification Violation for Lack of a Procedure for Tripping Failed Loss-of-Voltage Relays

The inspectors identified a Green finding with an associated Non-Cited Violation of Technical Specification 5.4.1 for the failure to have a procedure to trip a loss-of-voltage time delay relay, a specific and foreseen potential malfunction, after the time delay function of the channel

had failed. Specifically, on August 17, 2005, relay 1-62-3/A-06, associated with one channel of the 4160-Volt loss-of-voltage time delay function of the loss of offsite power EDG start and load sequence instrumentation, failed during calibration and testing. The licensee was not able to place the channel in trip in one hour (as required by TSs) due to not having an established procedure for performing this activity. The licensee took immediate corrective actions to correct the condition by replacing the time delay relay. In addition, at the end of the inspection period, the licensee planned additional evaluations and corrective actions to ensure the capability of performing the Technical Specification Action Condition within the required time frame.

The finding was more than minor, in that, it was associated with the procedure quality attribute of the Mitigating System cornerstone 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 was determined to be of very low risk significance because it did not involve a design deficiency, there was no actual loss of safety function, no single train loss of safety function for greater than the TS-allowed outage time, and no risk due to external events.

Inspection Report# : [2005010\(pdf\)](#)

G

Significance: Aug 19, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Starting Motor-Driven AFW Pumps for Certain Control Room Evacuations

A Green finding associated with a Non-Cited Violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed on July 19, 2005, for the failure to have an appropriate procedure to assure proper operation of the motor-driven auxiliary feedwater (AFW) minimum recirculation valves when operating the AFW system from outside the control room using local panels N-01 and N-02. As a result, if operators had performed AOP-10, "Control Room Inaccessibility," Revision 3, during an event, minimum recirculation valves AF-4007 and AF-4014 would not have opened when the AFW pumps were locally started with the discharge valves closed. This could have caused pump damage within one to two minutes.

The issue was more than minor because the finding was associated with the configuration control attribute of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding using IMC 0609, Appendix A, which indicated that a Phase 2 evaluation was necessary. However, because procedure AOP-10 was used when the control room was evacuated with no Appendix R fire and no other accident conditions, a Phase 3 evaluation was performed. The issue was characterized as Green based on the low initiating event frequency (evacuation of the control room for reasons other than an Appendix R fire) coupled with the accident mitigation available from the turbine-driven AFW pumps and feed and bleed capability. The licensee took prompt corrective action to revise procedure AOP-10.

Inspection Report# : [2005011\(pdf\)](#)

Significance: SL-IV Aug 19, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

No. 50.59 Safety Evaluation for a 2002 Modification to AFW

The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59(d)(1) for the licensee's failure in September 2002 to perform a safety evaluation of the removal of the internals of the auxiliary feedwater (AFW) common recirculation line check valve, AF-117. Specifically, the licensee 'screened out' adverse changes made concerning the function and operation of all four AFW pumps. In this case, an automatic passive design feature of the AFW recirculation line piping was being made unavailable and the function was being changed to operation of an untested, nonsafety-related, active component--the AFW common recirculation line relief valve AF-4035--and it was being supplemented through the use of manual operator actions. This change warranted a 10 CFR 50.59 safety evaluation to determine if the changes met the criteria requiring a licensee amendment.

Because the issue potentially affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. This finding was determined to be more than minor because the inspectors could not reasonably determine that the original change would have ultimately required NRC approval. The inspectors completed a Significance Determination Review using IMC 0609, Appendix A "Significance Determination of Reactor Inspection Findings for At Power Situations." Using the Phase 1 Screening worksheet the finding was determined to be of very low safety significance (Green) since the finding did not represent an actual loss of safety function for greater than the Technical Specification allowed outage time. Comparing this item to the examples in NUREG 1600, Supplement I, this finding is similar to Item D.5, "Violations of 10 CFR 50.59 that do not involve circumstances in which a change that required prior Commission approval would not be found acceptable had the approval been sought." As a result, the issue was considered to be of very low safety significance and was dispositioned as a Severity Level IV, Non-Cited Violation (NCV).

Inspection Report# : [2005011\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Loss of Decay Heat Removal Capability

A Green finding associated with a Non-Cited Violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to verify the appropriate residual heat removal (RHR) system lineup prior to the issuance of a tagging order. As a result, upon implementation of the tagging order, the licensee also failed to maintain cooling for the Unit 2 reactor coolant

system (RCS) in accordance with licensee procedures. Specifically, on April 19, 2005, the licensee performed a tagout on the 'B' train of safety injection while the 'B' RHR heat exchanger was in service and inadvertently isolated flow through the 'B' RHR heat exchanger, causing a loss of RHR for approximately 40 minutes.

The inspectors determined that a primary cause of this finding was related to the cross-cutting area of Human Performance, because the licensee failed to verify the appropriate conditions were established for implementation of the tagout.

The issue was more than minor because the finding was associated with the configuration control attribute of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding using IMC 0609, Appendix G, Phase 1 Screening, Checklist 4, "Pressurized Water Reactor (PWR) Refueling Operations: RCS level > 23' OR PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer," specifically, Section I.C, "Core Heat Removal Guidelines - Equipment," was applicable to this finding. The finding affected the RHR loop which was operable and in operation; however, the finding did not meet the requirements for a Phase 2 or Phase 3 analysis per Appendix G. Therefore the finding was determined to be of very low significance. The licensee took prompt action to enter the item into the corrective action process, develop and implement interim corrective actions and evaluate the issues to develop additional corrective actions.

Inspection Report# : [2005004\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Adverse Trend of Failure to Ensure Causal Evaluations for Conditions Adverse to Quality for which Operability Recommendations were Performed

The inspectors identified a finding of very low significance (Green) for an adverse trend of failures to perform causal evaluations for conditions adverse to quality which only received operability recommendations, to ensure the cause of the conditions were identified and corrected. The licensee further evaluated the issue and corroborated the adverse trend, and in addition identified the issue potentially extended to condition reports documenting conditions adverse to quality with only maintenance rule evaluations performed. No violation of NRC requirements occurred.

The inspectors also determined that the primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution, because the licensee failed to perform causal evaluations commensurate with the significance of the condition reports to ensure the conditions adverse to quality were identified and corrected.

The issue was more than minor because the underlying issues associated with the finding were associated with the equipment performance and design control attributes of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding using IMC 0609, Appendix A, Phase 1 screening for the Mitigating Systems cornerstone and determined the finding was of very low significance. The licensee took action to enter the item into the corrective action process and develop interim corrective actions. At the end of the inspection period, the licensee had not completed the evaluation of the finding.

Inspection Report# : [2005004\(pdf\)](#)

G

Significance: Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Refueling Water Storage Tank Inventory Loss

A Green finding associated with a Non-Cited Violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when an inadvertent inventory loss from the Unit 2 refueling water storage tank occurred. The inventory loss occurred when licensee personnel performed two procedures concurrently, which was not appropriate to the circumstances due to the equipment configuration conflicts created by performing the test procedures in this manner.

The inspectors determined that the primary cause of this finding was related to the cross-cutting area of Human Performance, because the licensee failed to appropriately validate and verify the procedures could be performed concurrently.

The issue was more than minor because the finding was associated with the configuration control and procedure quality attributes of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent core damage. The inspectors evaluated the finding using IMC 0609, Appendix G, Phase 1 Screening, Checklist 4, "PWR Refueling Operations: RCS level > 23' OR PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer," specifically Section II.C, "Inventory Control Guidelines-Equipment," was applicable to this finding. The inspectors determined the finding affected equipment necessary for makeup to the refueling cavity; however, the finding did not meet the requirements for a Phase 2 or Phase 3 analysis per Appendix G. Therefore the finding was determined to be of very low significance. The licensee took prompt action to enter the item into the corrective action process, evaluate the issues and develop corrective actions to address the causes of this finding.

Inspection Report# : [2005004\(pdf\)](#)

G**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Multiple Design Calculation Errors of very Low Safety Significance

A Green finding associated with a Non-Cited Violation of Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors. Specifically, the licensee failed to apply design control measures to verify the adequacy of the design for the head assembly upgrade package (HAUP) associated with the replacement reactor vessel closure head. Specifically, design calculations that support the HAUP design basis contained errors, including the failure to specify the American Institute of Steel Construction (AISC) or American Society of Mechanical Engineers Boiler and Pressure Vessel Code minimum fillet weld size requirements, the failure to transform bolt design loads into the analysis bolt pattern coordinate system, and the failure to evaluate the control rod drive mechanism cooling duct as a slender component in accordance with Appendix B5 of the AISC design code.

The finding was more than minor because if left uncorrected the finding could become a more significant safety concern. Specifically, failure to specify the AISC or American Society of Mechanical Engineers Code required minimum fillet weld size, or failure to transform bolt design loads into the analysis bolt pattern coordinate system, or failure to evaluate slender section components in accordance with AISC Appendix B5 in similar design calculations could result in modifications that exceed licensing basis design acceptance limits. The finding was of very low safety significance because the calculation errors in these instances did not result in an HAUP structure or component to exceed its design basis acceptance limit. The licensee took prompt action to enter the item into the corrective action process, evaluate the issues and develop corrective actions to address the causes of this finding.

Inspection Report# : [2005004\(pdf\)](#)G**Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Diesel Generator Fuel Oil Filters in Duplex

A Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for the failure to take corrective actions for a condition adverse to quality. The inspectors noted that in March 2003, corrective action program document CAP031641 was written to assess the licensee's operational practice of having the two fuel oil duplex strainers on each of the four emergency diesel generators set to dual filter mode instead of single mode. The assessment concluded that the optimal position was single mode because it allowed changing the filter elements with the emergency diesel generator running. The dual filter mode required the emergency diesel generator to be stopped to change the filters. In January 2004, CAP031641 was closed with no actions taken to address this condition adverse to quality.

The inspectors also determined that the primary cause of this finding was related to the cross-cutting area of problem identification and resolution, because the licensee failed to take any corrective actions to correct this condition adverse to quality.

This issue was more than minor because if left uncorrected the finding could become a more significant safety concern. In addition, the finding affected the Mitigating Systems cornerstone attributes of configuration control and equipment performance. The inspectors evaluated the finding using NRC Inspection Manual Chapter IMC 0609, Appendix A, Phase 1 screening for the Mitigating Systems cornerstone and determined that the finding was of very low safety significance because it was not a design or qualification deficiency that was confirmed to result in a loss of function per Generic Letter 91-18.

Inspection Report# : [2005003\(pdf\)](#)G**Significance:** Feb 27, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure Delays Return of Battery Charger

A finding of very low safety significance was self-revealed for a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for an Abnormal Operating Procedure (AOP) that was not adequate for returning safety-related battery chargers to an operable status. Specifically, on February 27, 2005, an offsite line experienced a fault and became disconnected, causing a momentary phase-to-phase short and then a continuous open circuit. The transient caused a loss of power to all in-service safety-related battery chargers. Three of the four chargers were restored using the AOP, but one battery charger could not be promptly restored to service because the AOP was inadequate. The licensee took prompt action to enter the item into the corrective action process and change the procedure.

The inspectors concluded that the finding was more than minor because if left uncorrected the item could become a more significant safety concern, and it was associated with the procedure quality attribute of the Mitigating Systems cornerstone. The finding was considered to be of very low safety significance since the finding did not involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event.

Inspection Report# : [2005003\(pdf\)](#)G**Significance:** Feb 16, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Air Leak On AFW Recirculation Flow Control Valve

A finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" was identified by the inspectors. The finding was associated with an air leak that inspectors found on an air supply fitting to the minimum flow recirculation control valve for the Unit 2 turbine-driven auxiliary feedwater (TDAFW) pump. The licensee determined that the leak most likely resulted when a fitting was inadvertently loosened during maintenance. Post-maintenance testing did not detect the loose fitting. Following discovery of the leak by the inspectors 6 days after the maintenance, the licensee entered the issue into its corrective action program, declared the TDAFW pump for Unit 2 inoperable, and repaired the leak.

The inspectors determined that the primary cause of this finding was related to the cross-cutting area of human performance, because the licensee failed to ensure that post-maintenance testing was adequately conducted for the component.

This issue is more than minor because it impacted the operability of a component in the Mitigating Systems cornerstone and affected the objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was screened through the Phase II screening in the Significance Determination Process (SDP) of Inspection Manual Chapter (IMC) 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At Power Situations," since the component was impacted for greater than the Limiting Condition for Operation. The findings was determine to be of very low safety significance based on the review. This finding was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings."

Inspection Report# : [2005003\(pdf\)](#)



Significance: G Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action." Failure to Take Corrective Actions for a Condition Adverse to Quality

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to take actions for a condition adverse to quality. Specifically, in September 2003 a condition report was written to address the susceptibility of fouling of a small mesh strainer installed in a fire protection line which provided emergency cooling to the turbine driven auxiliary feedwater pumps and turbine bearing coolers. The condition report also identified that procedure guidance did not exist for operators to utilize an existing flush valve on the strainer if the strainer became clogged during use. The inspectors identified that in August 2004, the condition report was closed with no actions taken to address this condition adverse to quality. At the end of the inspection, the licensee took corrective actions to ensure that as a minimum, the appropriate procedural guidance existed if the strainer became clogged during use.

The inspectors also concluded the primary cause of this finding was related to the cross-cutting area of problem identification and resolution, because the licensee failed to take any corrective actions to correct this condition adverse to quality.

This finding was more than minor because if left uncorrected the finding could become a more significant safety concern. In addition, the finding affected the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with the Significance Determination Process, this finding was determined to be a Non-Cited Violation of very low safety significance because it was not a design or qualification deficiency that was confirmed to result in a loss of function per Generic Letter 91-18.

Inspection Report# : [2004012\(pdf\)](#)

Significance: SL-IV Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a Safety Evaluation as Required by 10 CFR 50.59, "Changes, Tests and Experiments"

The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59(d)(1) for the licensee's failure to perform a safety evaluation for changes made to the Final Safety Analysis Report. Specifically, the licensee 'screened out' a change to the Final Safety Analysis Report which modified operator response times for the Steam Generator Tube Rupture Chapter 14 Accident Analysis contained in the Final Safety Analysis Report. Specifically, a time requirement for equalizing primary and secondary pressure was removed from the Final Safety Analysis Report. In addition, the licensee changed the time in which isolation of the affected Steam Generator could be achieved from 10 minutes to 30 minutes. At the end of the inspection period the licensee initiated a corrective action to perform a safety evaluation in accordance with 10 CFR 50.59 for this Final Safety Analysis Report change.

Because the Significance Determination Process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, this issue was dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. However, the results of the violation were assessed using the Significance Determination Process.

This finding was determined to be more than minor because the inspectors could not reasonably determine that the change would not ultimately require NRC approval. The inspectors determined that even though the change was not adequately evaluated in accordance with 10 CFR 50.59, this violation was of very low safety significance because the design basis safety-related functions of mitigating systems to respond to this initiating event scenario were not adversely affected. The inspectors evaluated the results of the finding using the Significance Determination Process for the mitigating systems cornerstone. The inspectors determined that the results of the finding were of very low safety significance

because the finding was not a design or qualification deficiency that was confirmed to result in a loss of function per Generic Letter 91-18. Therefore, the results of the violation were determined to be of very low safety significance and the violation was classified as a Severity Level IV Non-Cited Violation.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50, Appendix B, Criterion XI, "Test Control." Failure to Have Adequate Test Procedures for the Testing of Safety-Related Switches

A Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to establish and perform testing required to demonstrate that components will perform satisfactorily in service with written test procedures which incorporate applicable requirements and acceptance limits. The licensee performed post-maintenance testing of a component cooling water pump control switch, a safety-related component, without the use of a written test procedure which incorporated the applicable requirements and acceptance limits for testing to demonstrate the component would perform satisfactorily in service. The licensee's extent of condition identified the potential for at least 11 additional activities for which safety-related components did not have the appropriate test procedures established. At the end of the inspection period, the licensee developed actions to correct the identified deficiencies and to ensure licensee personnel were aware of the requirements to use procedures for the testing of safety-related components.

This issue was more than minor because if left uncorrected the finding could become a more significant safety concern. In addition, the finding affected the mitigating systems cornerstone attribute of procedure quality, specifically maintenance and testing (pre-event) procedures, and the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. In accordance with the Significance Determination Process, this finding was determined to be a Non-Cited Violation of very low safety significance because the finding was not a design or qualification deficiency that was confirmed to result in a loss of function per Generic Letter 91-18.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Nov 19, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure That a Safe Shutdown Procedure Directed Alignment of Instrumentation to a Direct Current Bus with a Battery Charger

A finding of very low safety significance was identified by the inspectors for failure to align safe shutdown instrumentation to an electrical bus with a battery charger in procedure AOP-10A, "Safe Shutdown - Local Control." Specifically, the procedure aligned Units 1 and 2 safe shutdown instrumentation to a 125Vdc bus that did not have a battery charger available to support the selected instrumentation.

This issue was more than minor because it affected the procedure quality attribute of the Reactor Safety Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the safe shutdown instrumentation associated with this bus, without a battery charger, could potentially become inoperable as the voltage of the battery supplying the bus decreased. Operators could select another bus with a safe shutdown inverter, however, the procedure did not direct this action. To correct this procedural error, the licensee issued Temporary Change Notice 2004-0762. This issue was entered into the licensee's corrective action program as CAP059262 and CE014635. The issue was of very low safety significance because it did not represent an actual loss of a safety function. The issue was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings," for failure to provide a procedure of a type appropriate to the circumstances.

Inspection Report# : [2004010\(pdf\)](#)

G

Significance: Nov 03, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Vendor Breaker Testing Requirements Not Incorporated in Procedure

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because the licensee did not evaluate a Technical Bulletin issued by Westinghouse in March 2004 regarding safety-related breakers and incorporate the testing instructions specified in the Bulletin into the applicable station procedures.

The finding was greater than minor because it was associated with the procedure quality attribute of the Reactor Safety Mitigating Systems cornerstone and affected the associated 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 finding is of very low significance as it did not involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event. The licensee entered the issue into its corrective action program. As part of corrective actions, the licensee evaluated the Technical Bulletin and incorporated the testing instructions into applicable station procedures.

Inspection Report# : [2004008\(pdf\)](#)

G**Significance:** Nov 03, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Actions for a Part 21 Notification on Diesel Governors Were Not Timely

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," because the licensee failed to promptly evaluate and resolve a 10 CFR Part 21 issue from 2001 involving the governors on all four emergency diesel generators (EDGs). The Part 21 issue pertained to the service life of electrolytic capacitors in the governor control system of all four safety-related EDGs. The capacitors in the four EDGs were beyond the service life specified by the vendor in the Part 21 and, in three of four EDGs, the capacitors were beyond the industry's slightly longer replacement interval.

The finding is greater than minor because it was associated with the equipment performance attribute of the Reactor Safety Mitigating Systems cornerstone and affected the associated cornerstone objective of ensuring the availability, reliability, and capability of systems (the EDGs) that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding is of very low safety significance because it did not involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event. The licensee entered the issue into its corrective action program and evaluated a recent industry study that indicated a slightly greater service life of the capacitors. In addition, the licensee has made plans to replace the capacitors on an accelerated schedule.

Inspection Report# : [2004008\(pdf\)](#)**G****Significance:** Nov 03, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement a Molded-Case Circuit Breaker Test Program

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," because the licensee failed to implement a program to assure that the installed molded-case circuit breakers (MCCBs) will perform satisfactorily in service.

The finding was greater than minor because it was associated with the Reactor Safety Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, capability of systems that responds to initiating events to prevent undesirable consequences (i.e., core damage). Molded-case circuit breakers provide for breaker coordination, over-current protection, fire prevention, and multiple other safety-related functions. The finding is of very low safety significance because it did not involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event. The licensee entered the issue into its corrective action program. As part of its corrective actions, the licensee planned to institute an exercising and testing program for safety-related MCCBs.

Inspection Report# : [2004008\(pdf\)](#)**G****Significance:** Nov 03, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Identification of Overfilled Safety Injection Accumulator

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." The licensee had indications in mid-February 2004 that the water level in a Unit 2 safety injection accumulator was high offscale, a significant condition adverse to quality, but the indications were not verified until about 1½ months later. In addition, the licensee did not evaluate why the issue took 1½ months to resolve.

The finding is greater than minor because it was associated with the human performance attribute of the Reactor Safety Mitigating Systems cornerstone and affected the associated cornerstone objective of ensuring the availability, reliability, and capability of systems (the safety injection system) that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding is of very low safety significance because it did not involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event. As corrective action, the licensee implemented a procedure to ensure that decision-making for future significant equipment problems was conducted in a systematic, well-thought out manner.

Inspection Report# : [2004008\(pdf\)](#)**G****Significance:** Nov 03, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Vendor Torque Values Not Listed in Procedure

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," having very low safety significance. Specifically, the licensee failed to incorporate the vendor's torque requirements for breaker arc chute fasteners into station procedures.

The finding is greater than minor because it was associated with the procedure quality attribute of the Reactor Safety Mitigating System cornerstone and affected the associated 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 finding is of very low safety significance because it did not

involve a design or qualification deficiency, did not represent a loss of safety function, and did not involve an external initiating event. The licensee entered the issue into its corrective action program and revised the procedure to include the vendor's torque requirements.

Inspection Report# : [2004008\(pdf\)](#)

R

Significance: Mar 24, 2003

Identified By: NRC

Item Type: VIO Violation

Apparent violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to establish the appropriate design control measures for the installation of orifices to the AFW recirculation lines

An apparent violation was identified, in part, through a self-revealing event when decreased auxiliary feedwater pump recirculation flow was noted during post-maintenance testing. Subsequent licensee and NRC review of the event determined that the licensee had installed incorrectly designed orifices in each of the pump recirculation lines. The orifices, due to small clearances, were susceptible to plugging. The primary causes of this finding were inadequacies in the licensee's design process and the licensee's implementation of the process, including the identification of system design requirements and the development of supporting safety evaluations.

The issue has been preliminarily determined to have high safety significance (Red). Following installation of the inadequately designed orifices, the entire auxiliary feedwater system was susceptible to a common mode failure during operations using service water. Failure of auxiliary feedwater during several initiating events could lead to core damage. The installation of the incorrectly designed orifices in the recirculation lines is an apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

On December 11, 2003, the final significance determination letter was issued for this finding. It was determined that this is a RED finding for Unit 2 and a YELLOW finding for Unit 1. For tracking purposes, identical findings were opened for Unit 1 (designated as YELLOW) and Unit 2 (designated as RED).

Inspection Report# : [2002015\(pdf\)](#)

Significance: N/A Mar 24, 2003

Identified By: NRC

Item Type: VIO Violation

The failure to identify the root cause and implement corrective actions for the AFW/IA issue, a significant condition adverse to quality, so as to prevent recurrence.

A violation was identified for the licensee's failure to implement adequate corrective actions to effectively address a previous Red finding and preclude recurrence (Inspection Report 50-266/01-17; 50-301/01-17). Specifically, the licensee failed to identify potential common mode failures that existed involving power supplies to the recirculation line air-operated valve and other system components. In addition, the licensee's corrective actions for the potential common mode failure associated with a loss of instrument air did not preclude repetition. Specifically, the licensee's corrective actions, to upgrade the safety function of the air-operated recirculation valve, failed to ensure that successful operation of the recirculation line air-operated valve was dependent only on safety-related support systems. Following the corrective actions, successful operation of the valve was still dependent upon nonsafety-related power to an interposing relay. Additionally, the corrective actions failed to discover a single failure mechanism involving a system orifice modification.

The issue was more than minor because the failure to implement appropriate corrective actions resulted in the auxiliary feedwater system continuing to rely on nonsafety-related support systems and to be susceptible to a single event causing a total system failure. The failure of nonsafety-related support systems and single event failures are an expected condition during several design basis accidents and should not cause a safety system to fail. The failure of the licensee to implement adequate corrective actions is a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action."

This violation is associated with a previously identified RED finding (IR 50-266;50-30/01-17).

Inspection Report# : [2002015\(pdf\)](#)

R

Significance: Feb 28, 2002

Identified By: Licensee

Item Type: VIO Violation

POTENTIAL COMMON MODE FAILURE OF AUXILIARY FEEDWATER PUMPS DUE TO INADEQUATE PROCEDURAL GUIDANCE

Units 1 and 2. The licensee identified a potential common mode failure of the auxiliary feedwater pumps due to operator actions specified in plant procedures. The team identified that procedural guidance provided to operators was inadequate to prevent such a common mode failure. In addition, the team identified that the licensee had seven opportunities, from 1981 through 1997, to identify the problem and take appropriate corrective actions. After considering the information developed during the inspection and the information the licensee provided at the April 29, 2002, regulatory conference, the NRC concluded that a violation of 10 CFR Part 50, Appendix B, Criterion XVI, was appropriate for two of the originally proposed seven examples. The failures to provide adequate procedural guidance and to take appropriate corrective actions are both a violation of 10 CFR Part 50, Appendix B, Criteria V and XVI. This issue has been determined to have high safety significance (Red). A common mode failure of the auxiliary feedwater pumps would result in substantially reduced mitigation capability for safely shutting down the plant in response to certain transients. The significance was determined to be high largely due to the relatively high initiating event frequencies associated with the involved transients and the high likelihood of improper operator actions due to the procedural inadequacies. The final significance determination for the Red finding and Notice of Violation were issued to the licensee in a letter dated July 12, 2002.

Inspection Report 50-266/02-15; 50-301/02-15, issued April 2, 2003, documented the NRC decision that this finding is not an Old Design Issue.

Inspection Report# : [2001017\(pdf\)](#)

Inspection Report# : [2003003\(pdf\)](#)

Barrier Integrity

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Adequate Corrective Actions to Preclude Repetition of a Significant Condition Adverse to Quality

A Green finding associated with a Non-Cited Violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to take adequate corrective action to preclude repetition of a significant condition adverse to quality was identified by the inspectors. Specifically, the licensee identified that the root cause of an April 9, 2004, potential loss of a hot leg vent path during nozzle dam installation, a failure to adequately identify, track and maintain licensee commitments to Generic Letter 88-17 in plant procedures, a significant condition adverse to quality. Prior to the start of the Unit 2 Refueling Outage, the inspectors identified that the approved outage shutdown safety analysis contained an orange risk path, during which the licensee would have been unable to close the containment equipment hatch within the time to boil the water around the fuel. The licensee's root cause evaluation for this issue identified the root cause was the same as the April 2004 event; therefore, the licensee's corrective actions from the April 2004 event failed to preclude repetition of the identified cause. The licensee took prompt corrective action to remove these planned activities from the outage schedule to ensure the equipment hatch was closed when the RCS was breached; however, the licensee also identified in the root cause evaluation that this configuration actually occurred in the 1999 Unit 1 Refueling Outage.

The inspectors also determined that a primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution, because the licensee failed to take adequate corrective actions to preclude repetition of a significant condition adverse to quality.

The issue was more than minor because the finding was associated with preserving the containment boundary attribute of the Barrier Integrity cornerstone and affected the cornerstone objective of providing reasonable assurance that the physical design barriers (Containment) protect the public from radionuclide releases cause by accidents or events. The inspectors evaluated the finding using IMC 0609, Appendix G, Phase 1 Screening, Checklist 3, "PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity Level <23'," specifically Section IV, "Containment Control Guidelines." The finding dealt with the procedures and training to close containment prior to core boiling when the RCS was open. The finding did not meet any of the criteria requiring a Phase 2 or 3 Analysis per Appendix G, Checklist 3, specifically findings that degrade the ability of containment to remain intact following a severe accident. This was in part due to the type of RCS system breach which was scheduled. Therefore, the finding was determined to be of very low significance. The licensee took prompt action to enter the item into the corrective action process, evaluate the issues and develop corrective actions to address the causes of this finding to preclude repetition.

Inspection Report# : [2005004\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : November 30, 2005