

Point Beach 1

3Q/2006 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: FIN Finding

Failure to Take Adequate Actions for Potential High Wind Conditions

A finding of very low safety significance was identified by the inspectors for failure to control loose materials in the protected area in the vicinity of the main and auxiliary transformers. No violation of NRC requirements occurred. Failure to take action to remove loose material in the protected area has problem identification and resolution cross-cutting aspects involving failure of assigned personnel to identify and correct potential tornado missiles that could be generated from such loose material in the vicinity of the main and auxiliary transformers. Once identified, the licensee initiated a corrective action program document to develop a surveillance procedure to remove loose materials before summer months when potential adverse weather was possible, performed walkdowns of the affected areas, and removed material which could become a potential hazard in high velocity winds and tornadoes.

The inspectors determined that the finding was more than minor because, if left uncorrected, the loose items adjacent to the main and auxiliary transformers would become a more significant safety concern. The issue is of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; 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; and the finding did not increase the likelihood of a fire or internal or external flooding. The issue is not considered a violation of regulatory requirements because the finding did not affect safety-related structures, systems, or components.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: FIN Finding

Self-Revealed Failure of Unit 1 Circulating Water Pump 1P-30B Due to Inadequate Maintenance

A finding of very low safety significance was self-revealed when the failure of circulating water (CW) pump 1P-30B and subsequent reactor trip occurred on December 13, 2005. This Green finding with no associated violation was identified for the licensee's failure to provide an adequate maintenance procedure for CW pump 1P-30B. Lack of appropriate maintenance to maintain required clearances, due to inadequate procedures, resulted in excessive clearances within the pump and the lower shaft sleeve failing directly above the flange where the shaft sleeve attached to the guide vane. The failure of the shaft sleeve caused increased vibration which resulted in low stress, high cycle fatigue of the coupling bolts. When the coupling bolts sheared, a rapid loss of condenser vacuum occurred and the operators initiated a manual reactor trip in anticipation of a total loss of vacuum.

The intermediate term corrective action was to perform a root cause evaluation for the failure mechanism and repair CW pump 1P-30B. Repair included replacement of the coupling and coupling bolts. The licensee completed the root cause evaluation and identified several actions to prevent recurrence.

The inspectors concluded the finding is greater than minor because it is associated with the equipment performance attribute of the Initiating Events Cornerstone and affected the 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. The transient initiator contributor was a reactor trip that did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Consequently, the finding is considered to be of very low safety significance.

Inspection Report# : [2006002\(pdf\)](#)

Mitigating Systems

Significance:  Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Common Mode Failure Mechanism Due to Overdutied Circuit Breakers

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance involving electrical system short circuit studies. Specifically, the inspectors identified that the licensee failed to identify or analyze the potential consequences of faults on non-seismically protected circuits, or the potential for degradation of redundant trains due to a fault on a non-safety circuit that is routed in raceways associated with both redundant trains.

The inspectors determined that the finding was more than minor because the failure to identify and analyze unacceptable consequences of overdutied circuit breakers could impact their safety function. In the evaluation, The inspectors determined that the finding screened as Green because, as an immediate corrective action for this issue, the licensee performed an operability evaluation that determined that despite the failure to properly analyze the consequences of overdutied circuit breakers, there was sufficient cable impedance to assure that loss of redundant buses due to postulated faults would not occur.

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative EDG Loading Calculation

The inspectors identified a finding of very low safety significance associated with a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, Emergency Diesel Generator (EDG) Room exhaust fans, EDG diesel air start compressors, and additional loading caused by the EDG operating at frequencies above 60 Hertz (Hz) were not considered in the licensee's EDG loading calculation. The licensee determined that this issue was not an operability concern, because these additional loads did not cause the EDG to be overloaded during design basis accident conditions.

The issue was more than minor because the failure to identify loads that would be supplied during an accident condition could result in eventual overloading of the EDG. The finding screened as having very low significance (Green) because the inspectors answered "no" to all five questions under the Mitigating Systems Cornerstone column of the Phase 1 worksheet. After performing a calculation to support operability, it was determined that there were conservatisms and other unnecessary loads in the EDG loading calculation that served to counteract the non-conservatisms that were identified by the inspection team resulting in the EDG not exceeding any vendor load limitations

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of a 4 Hour SBO Coping Duration Heat-Up Calculation for the AFP Rooms

The inspectors identified a finding of very low safety significance associated with a violation of 10 CFR 50.63, "Loss of all Alternating Current Power." Specifically, the licensee never performed a calculation that evaluated the effects of loss of ventilation on the Auxiliary Feedwater Pump (AFP) room during a Station Blackout (SBO). The AFP rooms, which each house a turbine driven AFP (TDAFP), had not been evaluated for the heatup that would occur during the SBO 4 hour coping duration. In response to the inspector's concerns, the licensee performed informal calculations to provide reasonable assurance that the heatup in the room during an SBO would not adversely affect the equipment.

The issue was more than minor because the licensee had not maintained a heatup calculation for the TDAFP room that assessed the effects of heatup on safe shutdown equipment as required for station blackout. The finding screened as having

very low significance (Green) because the inspectors answered “no” to all five questions under the Mitigating Systems Cornerstone column of the Phase 1 worksheet.

Inspection Report# : [2006006\(pdf\)](#)



Significance: Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Condensate Storage Tank Vortexing Calculation Did Not Bound Station Blackout Scenario

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” having very low safety significance (Green) involving the useable volume in the condensate storage tank (CST). Specifically, the inspectors identified that the licensee’s calculation to show that there would not be vortexing in the CST was not bounding for the station blackout scenario, which was the basis for the CST volume stated in the Technical Specifications. The licensee’s corrective actions included verifying the CST contained a sufficient volume to prevent vortexing in support of a station blackout scenario, and initiated actions to perform a formal calculation and to established an administrative limit to increase the available margin from the Technical Specification limit.

The finding was more than minor because the failure to adequately evaluate the CST vortex limit could have led to an insufficient useable volume in the CST preventing the auxiliary feedwater system from performing its function during a station blackout scenario and could have affected the mitigating systems cornerstone objective of design control. The finding was of very low safety significance based on the results of the licensee’s analysis and screened as Green using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006006\(pdf\)](#)



Significance: Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Unverified Fouling Factor Assumption for Containment Fan Coolers

The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, relating to the safety-related Containment Fan Coolers (CFC) for not assuring that the fouling factor inside the tubes was not maintained above the minimum specified analytical limit to prevent boiling of Service Water inside the coolers' tubes during accident conditions. Specifically, the licensee visually inspected the coolers and did not establish a specific criterion for accepting a fouling factor not lower than the established minimum of 0.0003 ft²-hr-°F/Btu to prevent boiling inside the tubes.

This finding was greater than minor because the current method of testing the fan coolers did not demonstrate that the existing fouling was such to prevent boiling. The finding screened as Green because, as an immediate corrective action, the licensee demonstrated through an evaluation that if boiling occurred, it will occur first in the upper tubes before the condition of the water in the lower tubes will cause boiling. This would result in excess service water flow to the lower tubes such that the fan coolers could still perform their safety function.

Inspection Report# : [2006006\(pdf\)](#)



Significance: Sep 29, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Reactor Water Storage Tank/Spent Fuel Pool Pipe Support Calculation Deficiencies

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” having very low safety significance involving a modification that upgraded the Reactor Water Storage Tank/Spent Fuel Pool recirculation loop small bore piping and the Units 1 and 2 Reactor Water Storage Tank cross connect branches from the loop to Seismic Class I piping. Specifically, the inspection team found numerous non-conservative technical errors and calculation omissions in seismic design basis analysis calculations that supported this modification. This issue was entered into the licensee’s corrective action system.

The issue was more than minor because the presence of these non-conservative calculational deficiencies resulted in seismic design basis analysis calculations to be re-performed to assure that the pipe supports would function as required

during the design basis seismic event. The finding screened as having very low significance (Green) because the inspectors answered “no” to all five questions under the Mitigating Systems Cornerstone column of the Phase 1 worksheet. Specifically, after re-performing the calculations for the supports that were called into question by the inspection team, the licensee was able to show that enough margin was still available to support the loads that would be seen during the design basis seismic event.

Inspection Report# : [2006006\(pdf\)](#)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation for Compensatory Measures Described in Operability Recommendation

The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59(d)(1) for the licensee’s failure to perform an evaluation for compensatory actions taken to maintain the closed function of the emergency core cooling system (ECCS) containment sump isolation valves. Specifically, the licensee established compensatory actions in the event remote operation from the control room of the containment sump recirculation isolation valves (1SI-850A, 1SI-850B, 2SI-850A and 2SI-850B) was ineffective during plant minimum or degraded voltage conditions. The licensee had not completed a causal evaluation by the end of the inspection period; however, remedial corrective actions to address certain aspects of this issue had been implemented.

Because violations of 10 CFR 50.59 affect the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. In accordance with the NRC Enforcement Policy, this finding is determined to be more than minor because there was a reasonable likelihood that the change requiring the 10 CFR 50.59 evaluation would require NRC review and approval prior to implementation. This finding has been reviewed by NRC management and is determined to be a Green finding, of very low safety significance.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain and Implement Adequate Procedures for Control Room Ventilation Testing

The inspectors identified a Non-Cited Violation of Technical Specification 5.4.1 for the failure to have adequately established, implemented, and maintained procedures for Technical Specification Surveillance testing of the control room emergency filtration system. The inspectors observed the performance of the 18-month surveillance for testing of the control room emergency filtration system, per procedure HPIP-115.4. The inspectors noted that the visual inspection, charcoal sampling, collection of the fan flow data, and the compilation/evaluation of fan flow measurement data were conducted but not as specified in the procedure.

The inspectors also determined that a primary cause of this finding was related to the cross-cutting area of problem identification and resolution. The last performance of this test, conducted 18 months prior, revealed numerous performance deficiencies, which included an inadequate procedure and the failure to properly implement portions of the procedure. However, the corrective actions taken for the deficiencies identified during the last performance failed to correct the procedure maintenance and implementation issues associated with procedure HPIP-11.54. The licensee had not completed a causal evaluation by the end of the inspection period; however, the licensee had implemented remedial corrective actions to address certain aspects of this issue.

The inspectors concluded that the finding is greater than minor because it is associated with the procedure quality attribute for maintenance and testing (pre-event) procedures of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated this finding using the significance determination process and determined that this finding is a licensee performance deficiency of very low risk significance (Green).

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Update and Maintain the Final Safety Analysis Report as Required by 10 CFR 50.71(e)

The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR Part 50.71(e) for the self-revealed failure to update the Final Safety Analysis Report (FSAR) to assure that the information in the report was the latest information developed and contained all changes necessary to reflect information and analyses submitted to the NRC. This finding was self-revealed following the inspectors' identification of numerous FSAR inaccuracies concerning licensee responses to generic docketed correspondence to the commission. This was further corroborated by a follow-up licensee self-assessment and streaming analysis conducted by the licensee. As a result, the licensee initiated a root cause evaluation which also identified the failure to update the FSAR in response to licensee credited actions, new NRC regulations, programmatic licensee commitments, and certain license amendment safety evaluation reports.

The inspectors determined that a primary cause of the finding was related to the cross-cutting element of human performance due to the failure to have processes and procedures to maintain the current licensing basis and a lack of knowledge by plant staff of regulatory requirements. The licensee has taken immediate remedial corrective actions to address several issues, including the development of a site policy and procedures which defined the current licensing basis. In addition, the licensee has planned comprehensive corrective actions, including a detailed project scope to update the FSAR.

Because violations of 10 CFR 50.71(e) affect the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. In accordance with the NRC Enforcement Policy, this finding is determined to be more than minor because a failure to update the FSAR could have had a material impact on safety or licensed activities. This finding has been reviewed by NRC management and is determined to be a Green finding, of very low safety significance.

Inspection Report# : [2006004\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Maintain Leak Detection Capability

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) for the failure to maintain the design basis and configuration control for the detection of recirculation system leakage from the containment sump isolation valve cylinders (valves SI-850A and SI-850B for Units 1 and 2). This issue was initially identified by the inspectors during walkdowns and reviews of the containment sump recirculation piping in November/December 2005; however, at that time, the issue was not recognized by the licensee as part of the design basis of the facility. During a review of a request for additional information from the Office of Nuclear Reactor Regulation regarding a November 8, 2005, 10 CFR 50.72 report, the licensee subsequently determined that, in fact, leakage detection of the containment sump isolation valve cylinders through the pipe sleeve into the auxiliary building was part of the system's design and licensing basis.

At the end of the inspection, the licensee had not completed a causal evaluation; however, several interim actions were in place to address the operable, but non-conforming condition. The licensee had established a corrective action to determine how to resolve this non-conforming issue.

The inspectors concluded that this finding is greater than minor because it was associated with the design control and the equipment performance attributes of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding is a design or qualification deficiency confirmed to not result in loss of function per NRC Generic Letter 91-18. Therefore, the inspectors determined that this finding is a licensee performance deficiency of very low risk significance (Green).

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Maintain Safety Function for SI-850 Valves in the Closed Direction

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) for the failure to ensure the safety function of the containment sump isolation valves was maintained and tested in accordance with the design and licensing basis. This issue was initially identified by the inspectors during walkdowns and reviews of the containment sump recirculation piping in November/December 2005; however, at that time, the issue was not recognized by the licensee as part of the design and licensing basis of the facility. The licensee subsequently determined that the design and licensing basis for the closed safety function of these valves was not properly implemented in accordance with the facility's license and required codes or standards.

The licensee performed a causal evaluation and developed several interim and long-term corrective actions. Those corrective actions included: revision of the inservice testing program documents for testing the valves; revision of the design basis document (DBD) for the residual heat removal system; reinforcement of the expectations with engineering staff on the use of DBDs and inservice testing background documents; and development of a project plan to update the inservice test background document.

The inspectors concluded that this finding is greater than minor because it was associated with the design control, equipment performance and maintenance and testing procedure quality attributes of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding is a design or qualification deficiency confirmed to not result in a loss of function per NRC Generic Letter 91-18. Therefore, the inspectors determined that this finding is a licensee performance deficiency of very low risk significance.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Address Effects of Elevated Temperatures on Control Room Instruments

The inspectors identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) when the licensee failed to consider the effects of elevated control room temperatures on instrument inaccuracies following a design basis loss-of-coolant accident, which could potentially affect mitigation of the event. During the Problem Identification and Resolution Inspection documented in NRC Inspection Report 2005012, the inspectors identified an unresolved item (URI) related to the effects of elevated control room temperatures on instrument accuracies and accident mitigation during a design basis loss of coolant accident. Subsequent review and root cause evaluation determined that the licensee had failed to consider the effects of elevated control room temperatures on instrument inaccuracies for a calculation associated with the reconstitution project.

The licensee entered the issue in its corrective action system and performed a root cause analysis. Corrective actions to prevent recurrence included strengthening review requirements for the 30 percent, 60 percent and Owner Acceptance Review of vendor-supplied calculations for the calculation reconstitution project.

The inspectors concluded that the finding was greater than minor, as the finding represented a programmatic deficiency associated with the calculation reconstitution project that, if left uncorrected, would become a more significant concern due to calculation errors. The design deficiency did not result in a loss of function per Generic Letter 91-18 as sufficient emergency diesel generators remained available through administrative controls to provide electrical power for operators to promptly restart the control room ventilation system, hence the finding screened as very low safety significance (Green).

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Safety Evaluations on Safety-Related Motors

A finding of very low safety significance was identified by the inspectors associated with the replacement of the 1P-10A residual heat removal pump (RHR) motor. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified for the failure to perform an equivalency evaluation for exceptions taken to motor specifications in the refurbishment of safety-related equipment. Specifically, the licensee failed to perform a technical evaluation for exceptions taken by the vendor to the licensee's motor specification for the 1P-10A RHR pump motor. Once identified, the

licensee initiated a corrective action program document (CAP) to perform an engineering evaluation before placing 1P-10A in service. The licensee also initiated an extent of condition review to ensure that other equipment was not subject to the same issues.

The inspectors determined that the finding was greater than minor because it: (1) involved the design control attribute of the Mitigating Systems Cornerstone; and (2) affected 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 Inspection Manual Chapter 0609, Appendix G, Phase 1 Screening, and determined that Checklist 4, "PWR Refueling Operation: RCS level > 23' OR PWR Shutdown Operation with Time to Boil > 2 hours And Inventory in the Pressurizer," applied, specifically Section I.C, "Core Heat Removal Guidelines - Equipment." However, because the 'A' RHR loop was not in operation and the 'B' train RHR loop was operable and in operation with support systems available, the inspectors determined that Section I.C was not affected. Additionally, the finding did not meet the Checklist 4 criteria for Phase 2 or Phase 3 quantitative analysis because the finding did not: increase the likelihood of a loss of reactor coolant system (RCS) inventory, including a loss of RCS level instrumentation; degrade the licensee's ability to terminate a leak path or add RCS inventory when needed; or degrade the licensee's ability to recover decay heat removal once it was lost. The inspectors also determined that the finding was of very low safety significance because no event occurred that could be characterized as a loss of control as listed in Table 1 of Inspection Manual Chapter 0609, Appendix G. Therefore, the finding was considered to be of very low safety significance.

Inspection Report# : [2005013\(pdf\)](#)



Significance: Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Implement Procedures Related to Containment Debris Near ECCS Sump

A finding associated with a Non-Cited Violation of Technical Specification 5.4.1, Procedures, was identified by the inspectors when the licensee failed, on two different occasions during the refueling outage, to perform adequate containment walkdowns to verify that no debris was present in the vicinity of the Emergency Core Cooling System Containment Sump which could potentially impact operability. Failure to identify and remove the debris that were missed on the licensee walkdowns could have potentially challenged emergency core cooling system sump operability.

This finding is more than minor significance in that, the finding was associated with 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. Additionally, if left uncorrected, the finding would become a more significant safety concern. Specifically, debris left in the vicinity of the emergency core cooling system sump screen could partially impede flow to the RHR pumps, or result in head loss across a blocked sump screen affecting the net positive suction head available to the RHR pumps, during the recirculation phase and long term cooling following a loss-of-coolant accident or following a reactor vessel head drop event.

However, the finding is of very low safety significance as the finding did not increase the likelihood that a loss of RHR reactor coolant system (RCS) inventory, RCS level control, or power would occur. The finding did not degrade the licensee's ability to terminate a leak path, add RCS inventory, recover RHR once lost, establish an alternate core cooling path if RHR could not be re-established, or degrade the ability of containment to remain intact following a severe accident. Therefore, the finding was considered to be of very low significance. The inspectors also determined that a primary cause of this finding was related to the cross-cutting area of problem identification and resolution. The licensee failed to perform a causal analysis or extent of condition review, for the first instance of an inadequate ECCS sump debris inspection identified by the inspectors on October 4, 2005.

Inspection Report# : [2005013\(pdf\)](#)



Significance: Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Verification Testing of SI 850 Valves

The inspectors identified a finding involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," having very low safety significance for failure to complete testing, to demonstrate that the containment sump isolation valves (SI-850s) would remain open during post loss of coolant accident containment recirculation. This finding

was entered into the licensee's corrective action program.

This finding was more than minor significance, because it affected the design control; and the equipment performance attributes of the Mitigating Systems Cornerstone; and affected the equipment reliability objective for this cornerstone. Equipment reliability was affected because, as these valves begin to drift shut, the post loss of coolant accident recirculation flow would be affected and require operator actions to compensate for valve drift to ensure adequate long term core cooling. The inspectors answered "yes" to the question in the Mitigating Systems Cornerstone worksheet, which asked if the finding was a design or qualification deficiency, confirmed to not result in loss of function per Generic Letter 91-18. Therefore, the inspectors determined that this finding was a licensee performance deficiency of very low risk significance. Inspection Report# : [2005013\(pdf\)](#)

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions for Potential Boric Acid Corrosion of SI-850 Valves

The inspectors identified a finding involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" having very low safety significance for failure to implement prompt corrective actions and inspect carbon steel hydraulic operating cylinder components on the 1(2) SI-850(A)(B) valve actuators after becoming aware of the nonconforming and potentially degraded conditions involving boric acid deposits and associated corrosion. The licensee implemented actions to clean up boric acid deposits and entered this finding into the corrective action program.

This finding was more than minor significance because absent NRC intervention, this issue could have become a more significant safety concern. Specifically, the licensee would have allowed an acidic environment (boric acid deposits) or aqueous environment (submerged fasteners) for these carbon steel components to continue for an indefinite period of time which could have resulted in corrosion induced failures of the SI-850 valve actuators and it affected the Mitigating Systems Cornerstone objective of equipment reliability. The inspectors answered "yes" to the question in the Mitigating Systems Cornerstone worksheet which asked if the finding was a design or qualification deficiency confirmed to not result in loss of function per Generic Letter 91-18. Therefore, the inspectors determined that this finding was a licensee performance deficiency of very low risk significance. The cause of the finding was related to the cross-cutting element of problem identification and resolution.

Inspection Report# : [2005013\(pdf\)](#)

Significance: SL-IV Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Multiple Examples of the Failure to Notify the NRC Within 8 Hours as Required by 10 CFR 50.72

A finding of very low safety significance (with three examples) was identified by the inspectors for failure to notify the NRC within 8 hours in accordance with 10 CFR 50.72(b)(3)(ii)(B), following the identification that the nuclear power plant was in an unanalyzed condition that significantly degraded plant safety. Each occurrence was reported by the licensee following repeated questioning by the inspectors which occurred in April, September and November 2005. Following the November occurrence, the inspectors reviewed the licensee's previous causal evaluations and corrective actions. The inspectors noted that while the licensee had appropriately evaluated and initiated corrective actions for the technical issues in April and September 2005, the licensee had not appropriately evaluated or developed any corrective actions to address the failure to adequately report these issues to the NRC in a timely manner. Therefore, 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 appropriately evaluate and take adequate corrective actions for the reportability aspect of these issues.

Because this issue affects the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The inspectors determined that this violation is of very low safety significance and because the licensee entered the issue into their corrective action program (CAP068938), this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy. The licensee has taken actions to perform a causal evaluation and address the knowledge, and procedural aspects of this finding.

Inspection Report# : [2005013\(pdf\)](#)

Significance:  Dec 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Correct Potential Crimping Vulnerability of AFW Recirculation Line

A Non-Cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance was identified by the inspector. Specifically, the licensee failed to promptly correct a condition adverse to quality, the potential for the auxiliary feedwater (AFW) recirculation line to crimp during a design basis earthquake (DBE) or design basis tornado (DBT) event. The licensee missed prior opportunities to correct the adverse condition: 1) as a result of the two Red findings related to the AFW System, the licensee reviewed the AFW system for the effects of high energy line break, DBE, and DBT events and identified crimping of the non-safety related portion of the common AFW recirculation line as a potential common mode failure; and 2) an external self-assessment in mid-2003 also concluded that crimping of the AFW recirculation line was credible and a potential common mode failure.

The licensee corrected this adverse condition by: 1) installing a pretested replacement for AFW pump recirculation line relief valve AF-4035 that was manufactured to meet ASME Code Section VIII requirements; and 2) having commitments to periodically replace AFW recirculation line relief valve AF-4035 with a pretested valve. These actions provided reasonable assurance that AF-4035 would provide the required flowpath to protect the AFW pumps if the AFW recirculation line crimped during a DBE or DBT event. The licensee planned to supplement CAP066199 to address the inadequate corrective actions.

The finding was more than minor because it affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that mitigate transients and the reactor accidents, and if left uncorrected, the finding could become a more significant safety concern. Specifically, if left uncorrected the AFW recirculation line relief valve could have deteriorated over time, failed to open as designed, and not provided the required recirculation line flowpath to protect the AFW pumps if the recirculation line crimped during a DBE or DBT event. The finding was of very low safety significance because testing of the original AFW recirculation line relief valve demonstrated that the relief valve would have opened as designed and would have provided the required AFW recirculation flowpath if the AFW recirculation line crimped during a DBE or DBT event. 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# : [2005013\(pdf\)](#)

Significance: SL-IV Dec 16, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 10 CFR 50.59 Evaluation for Compensatory Actions Associated with Letdown Line Automatic Isolation

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 compensatory actions taken for an activity associated with a degraded plant condition. Specifically, the licensee "screened out" an activity which replaced an automatic action for Chemical and Volume Control System (CVCS) letdown isolation on low pressurizer level with a manual action to isolate letdown on low pressurizer level, while replacing the Unit 2 pressurizer low level bistables with Unit 2 online at power. At the end of the inspection period, the licensee planned to perform a safety evaluation in accordance with 10 CFR Part 50.59 for the compensatory actions taken for the activity associated with the degraded plant condition.

Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. The finding was determined to be more than minor because the inspectors, at the time of the inspection, could not reasonably determine that the UFSAR change, which adversely affected equipment important to safety, would not have ultimately required NRC approval. The inspectors evaluated the finding using IMC 0609, Appendix A, Phase 1 screening for the mitigating systems cornerstone and determined that the finding was of very low safety significance because the finding was not a design or qualification deficiency that was confirmed to result in a loss of operability or functionality per "Part 9900, Technical Guidance, Operability Determination Process for Operability and Functional Assessment."

Inspection Report# : [2005018\(pdf\)](#)

Significance:  Dec 16, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Apply Adequate Design Controls During Replacement of Service Water (SW) Valves SW-360 and SW-322

A self-revealed finding of very low safety significance was identified by the inspectors associated with a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." During replacement of the Service Water outlet valves for the Component Cooling Water (CCW) heat exchangers, the licensee failed to evaluate design differences between the original valves and the replacement valves. These differences led to the eventual failure of the stems in both valves.

The issue was more than minor because it affected the mitigating system cornerstone attribute of "Design Control." The finding screened as having very low significance (Green) using IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for the At-Power Situations," because the inspectors answered "no" to all five questions under the Mitigating Systems Cornerstone column of the Phase 1 worksheet. While the design deficiency led to failure of the valves, the failures occurred during a plant shutdown; therefore, the valves would not have been required to function as designed.

Inspection Report# : [2005018\(pdf\)](#)

Significance:  Oct 06, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Corrective Action Violation for Failure to Enter a Potential Condition Adverse to Quality into the Corrective Action Program

The team identified a Green Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to enter into the corrective action program vendor information with the potential to degrade safety-related equipment. Specifically, in June 2005, no corrective action program document was written after the licensee was notified by the reactor head vendor about potential problems resulting from the method of storage in the containment. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee counseled plant personnel in the reactor head replacement project about the need to enter such issues into the corrective action program.

This finding was more than minor because a more significant safety concern could occur if similar vendor issues were not entered into the corrective action program. The finding was of very low safety significance because the vendor subsequently determined that the head storage had been acceptable, no safety function was lost, no Technical Specification train or maintenance rule safety function was lost, and there were no external event concerns. The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of identification, because the licensee failed to promptly identify a condition adverse to quality.

Inspection Report# : [2005012\(pdf\)](#)

Significance:  Oct 06, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Design Control Violation for Failure to Incorporate Diesel Information into Procedures

The team identified a Green Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure, from around 1994 to the date of the inspection, to translate emergency diesel generator licensing and design bases into emergency and abnormal operating procedures. One emergency operating procedure and one abnormal operating procedure on each unit did not contain the diesel generator ratings and directed operators to place loads on the diesel generators that could exceed the licensing basis load limit. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee revised the procedures to incorporate the appropriate information.

This finding was more than minor because it involved the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective. Exceeding the licensing basis limit for diesel generator loading could affect the capability of the diesel generator to respond to a design basis accident, concurrent with a loss of offsite power and a single failure. The finding was of very low safety significance because this was a design deficiency with no loss of safety function

Inspection Report# : [2005012\(pdf\)](#)

G**Significance:** Oct 06, 2005

Identified By: NRC

Item Type: FIN Finding

Inadequate Extent-of-Condition Evaluation for an Inadequate Abnormal Operating Procedure

The team identified a Green finding for the failure, in around July 2005, to perform an adequate extent-of-condition review following problems with auxiliary feedwater local control stations. After the apparent cause evaluation determined ineffective procedure validation had occurred, the extent-of-condition review did not check other procedures for similar problems. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee was reviewing other procedures for similar problems.

This finding was more than minor because if left uncorrected, it could eventually result in failing to promptly identify conditions adverse to quality. The finding was of very low safety significance because no safety function was lost, no technical specification train or maintenance rule safety function was lost, and there were no external event concerns. The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of evaluation, because the licensee failed to adequately evaluate a condition adverse to quality.

Inspection Report# : [2005012\(pdf\)](#)**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\(pdf\)](#)**Y****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 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: R 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: SL-IV Dec 16, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Updated Final Safety Analysis Report Change to Replace ASME Class II, Seismic Class I, Piping with a Freeze Seal

The inspectors identified a Severity Level IV Non-Cited Violation associated with the failure to perform an adequate safety evaluation review as required by 10 CFR 50.59 for changes made to the facility as described in the UFSAR. In their safety evaluation, EVAL 2004-003, the licensee failed to provide a basis for the determination that on-line repairs to the excess letdown line with a freeze seal in place as a boundary for Reactor Coolant System (RCS) effluent from the Reactor Coolant Pumps (RCPs) was acceptable without a license amendment. Specifically, for this freeze seal evolution, the licensee would have replaced the American Society of Mechanical Engineers (ASME) Class II, Seismic Class I piping in the excess letdown line with a freeze plug while the plant was still on-line. Within the 10 CFR 50.59 evaluation, the licensee failed to provide a basis for why this freeze seal evolution did not present more than a minimal increase in the likelihood of occurrence of a malfunction of a Structure, System and Component (SSC) important to safety.

Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. The finding was determined to be more than minor because the inspectors could not reasonably determine that the UFSAR change, which adversely affected equipment important to safety, would not have

ultimately required NRC approval. The finding was determined to be of very low safety significance (Green), because the inspectors answered "no" to all three questions under the Containment Barriers Cornerstone column of the Phase 1 worksheet.

Inspection Report# : [2005018\(pdf\)](#)

Emergency Preparedness

Significance: **W** Dec 16, 2005

Identified By: NRC

Item Type: VIO Violation

Observation and Review of Emergency Preparedness Drill, August 1, 2002

On December 16, 2005, the staff issued a WHITE finding and NOV of 10 CFR 50.47. The WHITE finding was associated with the failure to self-identify the untimely declaration of an Alert classification during an August 2002 Emergency Preparedness drill. The inspection finding was assessed using the Significance Determination Process and was preliminarily characterized as WHITE.

In a January, 2006 telephone call, the licensee was informed that the NRC would be taking a one-time deviation from the Action Matrix process. Normally, a supplemental 95001 inspection would be performed after a WHITE finding is determined; however, in this case, the effectiveness of the licensee's corrective actions to improve the capability to identify, track, and resolve critique items associated with EP drills and exercises was demonstrated with no findings or PIs greater than GREEN identified by NRC since August 2003. Additionally, both individuals involved with providing inaccurate information had their employments terminated on December 20, 2002. The WHITE finding will not be considered indicative of current performance in the EP cornerstone, and will not be considered in formulating a regulatory course of action should a new WHITE finding occur in the EP cornerstone.

Inspection Report# : [2002010\(pdf\)](#)

Inspection Report# : [2005017\(pdf\)](#)

Significance: **SL-III** Nov 30, 2005

Identified By: NRC

Item Type: VIO Violation

Failure to Provide Complete and Accurate Information from August 1, 2002 EP drill

On December 16, 2005, the staff proposed a severity level III NOV of 10 CFR 50.9, and \$60,000 civil penalty. The violation involved inaccurate information provided to the NRC associated with a critique of the August 2002 EP drill.

In summary, on or about November 20, 2002, the licensee provided the Commission with information that was not complete and accurate in all material respects, concerning the results of post-drill critiques of an August 1, 2002 EP drill. Specifically, during an NRC inspection, the former Point Beach EP Manager provided NRC inspectors with a "Drill and Exercise Performance - Performance Indicator Evaluation Form", which indicated that the licensee had self-identified an untimely declaration of an Alert classification during the post-drill critique. In fact, the licensee had not identified the drill weakness during the August 2002 critique. The original document was date August 2, 2002, and stated that the licensee had declared the Alert classification 5 minutes after plant parameters reached the Emergency Action Level, and within the 15 minute limit. However, on or about November 15, 2002, the former EP Manager and former EP Coordinator altered the document to indicate that the Alert classification was made after the 15 minute limit had been exceeded. The EP Manager and former EP Coordinator also backdated the document to August 23, 2002, in order to give the appearance that the licensee, and not the NRC, had identified the drill weakness. Information on the "Drill and Exercise Performance - Performance Indicator Evaluation Form" is material to the NRC as it is used to determine whether weaknesses during an EP drill are identified, evaluated and corrected. The actions of the former EP Manager and former EP Coordinator, both licensee officials, resulted in the submission of materially inaccurate information to both NMC and the NRC, a violation of 10 CFR 50.9. The violation is categorized in accordance with the NRC Enforcement Policy at Severity Level III (EA-05-191). Additionally, the actions of the former EP Manager and former EP Coordinator were deliberate and violated 10 CFR 50.5, "Deliberate Misconduct."

Inspection Report# : [2005017\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Significance: SL-IV Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform a 50.59 Evaluation of Increased Design Loads on the Auxiliary Building

The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59(d)(1) for failure to perform a written evaluation of increased design loads on the crane and the auxiliary building. The licensee performed a calculation to demonstrate the capability of the auxiliary building to hold a single-failure-proof crane with a 125-ton load during a seismic event. After the inspectors identified that no written evaluation has been performed, the licensee completed the evaluation and concluded that a license amendment was not required as a result of increased design loads.

Because violations of 10 CFR 50.59 affect the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. In accordance with the NRC Enforcement Policy, this finding is determined to be more than minor because there was a reasonable likelihood that the change requiring the 10 CFR 50.59 evaluation would require NRC review and approval prior to implementation. This finding has been reviewed by NRC management and is determined to be a Green finding, of very low safety significance.

Inspection Report# : [2006004\(pdf\)](#)

Last modified : December 21, 2006