

Point Beach 2

1Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Prompt Corrective Actions for Recurring Cold Weather Issues

The inspectors identified a finding and associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance (Green) for the license's failure to take prompt corrective actions to address recurring cold weather issues in the facade building which again occurred in January 2008. The failure to take prompt corrective actions led to the formation of ice on offsite power and plant equipment cable trays and cabling, which supplied offsite power to both Units' busses. The sheets of ice were also in proximity to the Unit 2 refueling water storage tank level indicators and outlet piping. The licensee initiated condition reports, took immediate corrective actions, and was performing a causal evaluation at the end of the inspection period.

The finding is more than minor because if left uncorrected the finding would become a more significant safety concern in that the formation of ice in the facade building in this case could have affected safety related equipment. Because the ice buildup in the Unit 2 facade was an external factor and transient initiator contributor that did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, the finding is considered to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: FIN Finding

Failure to Control Loose Materials Classified as Tornado Hazards

The inspectors identified a finding of very low safety significance with no associated violation of regulatory requirements for the licensee's failure to control loose materials in the protected area. Specifically, the inspectors identified materials that were classified as tornado hazards per station procedure PC 99 near the Unit 1 and Unit 2 main and auxiliary transformers and the switchyard boundary. Once notified, the licensee entered the issue into its corrective action program and removed the materials. In addition, a procedure change request was initiated to incorporate tornado hazard walkdowns into the abnormal operating procedure for severe weather response.

The finding is more than minor because if left uncorrected, the loose items would become a more significant safety concern. The finding is of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of problem identification and resolution in that the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity (P.1(d)).

Inspection Report# : [2007005](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadvertent Chemical and Volume Control System Letdown Isolation Due to Inadequate Instructions, Procedures, and Drawings

A self-revealing finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the failure to have procedures appropriate to the circumstances for modifying the Unit 1 Charging Pump 1P-2B wiring as part of Modification MR 04-013*B, "CVCS [Chemical and Volume Control System] Charging Pump Variable Frequency Drives." Specifically, instructions were not provided to prevent isolation of reactor coolant letdown flow while performing wiring modifications for the 1P-2B Charging Pump. The licensee entered the issue into their corrective action program and took immediate corrective actions. The licensee continued to evaluate the causes and corrective actions to address this finding at the end of the inspection period.

The finding is greater than minor because it is associated with the design control and procedural quality attributes of the Initiating Events Cornerstone and affected the cornerstone objectives to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Additionally, the inadequate design review process that caused this problem, if left uncorrected, would become a more significant safety concern. The finding is of very low safety significance (Green) because the letdown isolation that occurred did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors also determined that the primary cause for this finding is related to the cross-cutting area of human performance. Specifically, under the component of resources, the licensee failed to ensure complete, accurate, and up-to-date installation workplans for modification of the 1P-2B Charging Pump wiring

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Appropriate Maintenance on Air-Operated Valve Positioner Linkage

A self-revealing finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance (Green), was identified for failure to have procedures appropriate to the circumstances for maintenance on air-operated valve positioners, when hardware attaching the connecting link between the Unit 1 "B" feedwater regulating valve positioner and actuator became disconnected resulting in loss of control of the valve. Specifically, there were no procedures that ensured that positioner arm hardware was properly secured. The licensee repaired valve positioners as required, performed an extent-of-condition review for similar valve positioners and is performing a root cause evaluation.

The inspectors concluded the finding is greater than minor because the finding was 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 (Green). The inspectors also determined that the primary cause of this finding is related to the cross-cutting area of human performance (H.2.(c)). Specifically, under the component of resources, the licensee failed to ensure complete, accurate, and up-to-date procedures and work packages for work on air-operated valve positioners were available.

Inspection Report# : [2007003](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: FIN Finding

Failure to Adequately Assess Operability of Service Water Pump P-32C

A self-revealed finding with no associated violation of regulatory requirements was identified for an inadequate operability evaluation performed in June 2007 for service water pump P-32C. Specifically, the pump failed its inservice test (IST) on high vibrations after approximately six hours of operation, but the operability evaluation had concluded the pump vibrations would not reach the out-of-service limit until after 120 hours of continuous operation. Contributing to the unanticipated early failure was the use of non-conservative decision-making and the use of a non-conservative assumption in the pump's vibration prediction model. The licensee entered this issue into its corrective

action program and P-32C was subsequently repaired and returned to service.

The finding is more than minor because it could reasonably be viewed as a precursor to a significant event. The finding is of very low safety significance (Green) 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 (TS) allowed outage time, and no risk due to external events. Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of human performance. Specifically, the licensee failed to use conservative assumptions in decision-making affecting operability of safety-related equipment (H.1(b)).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Operability Evaluations for Turbine-Driven Auxiliary Feedwater Pump 2P-29

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately assess operability of the Unit 2 2P-29 turbine-driven auxiliary feedwater (TDAFW) pump. The licensee failed to implement procedural requirements regarding the immediate assessment of operability on September 24 and September 27, 2007, for the increased water ingress into the turbine outboard bearing housing for the pump following maintenance activities. The licensee took corrective actions, which included performing an operability evaluation on November 1 when the next scheduled test again revealed higher than normal levels of water in the bearing oil. However, the inspectors continued to identify, in the subsequent revisions to the operability determination, that the licensee failed to utilize all the data available to assess pump operability. At the end of the inspection period, the licensee continued to evaluate the causes and corrective actions to address this finding.

The finding is more than minor because, if left uncorrected, the failure to properly assess operability would result in the TDAFW pump being degraded, and possibly inoperable for more than the allowed outage time in accordance with TSs with no action being taken. The finding is of very low safety significance (Green) because the inadequate operability determination did not result in exceeding the allowed outage time of TSs before action was taken. Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of human performance. Specifically, the licensee failed to use conservative assumptions in decision-making affecting operability of safety-related equipment (H.1(b)).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Have Adequate Procedures for the Refueling Water Storage Tank

A self-revealed finding and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified for the failure to have adequate procedures to allow operators to properly set the thermostat of the Unit 2 refueling water storage tank (RWST) heaters and to ensure the RWST was recirculated frequently enough for the temperature indicator to accurately measure bulk temperature. On September 18, 2007, the Unit 2 RWST was found to be at 105 °F. This temperature exceeded the TS-maximum allowable limit of 100 °F (97 °F parametric) and could not be restored to acceptable limits before the eight-hour TS action statement expired. As a result, a shutdown of Unit 2 was commenced. At 20 percent power, a return to full power began after the RWST temperature was restored to within acceptable limits. It was later identified that the undesired heat-up was caused by the incorrect setting of the controlling thermostat for the RWST heaters.

The finding is more than minor because it is associated with the procedure quality and human performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding is of very low safety significance (Green) because the elevated temperature of the RWST and subsequent shutdown sequence did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of human performance. Specifically, human error prevention techniques were not utilized

prior to and during the thermostat setting task and personnel proceeded in the face of uncertainty and unexpected circumstances (H.4(a)).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Adequate Post-Maintenance Testing for the Turbine-Driven Auxiliary Feedwater Pumps

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to conduct adequate post-maintenance testing of the Unit 1 1P-29 turbine-driven auxiliary feedwater (TDAFW) pump following a ten-year overhaul of the turbine in May 2007. Specifically, the ten-year overhaul maintenance included bearing replacement, but the TDAFW pump was not run long enough during testing for bearing temperature to stabilize. The appropriate post-maintenance test would have detected that the bearing temperatures were rising and required evaluation prior to declaring the TDAFW pump operable. The licensee entered the issue into its corrective action program and took immediate corrective actions. Additionally, the licensee initiated changes to the inadequate procedures.

The finding is more than minor because, if left uncorrected, the issue would have become a more significant safety concern. The inspectors determined this finding was not a design qualification deficiency resulting in a loss of function per NRC Generic Letter 91-18, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding is considered to be of very low safety significance (Green). Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of human performance. Specifically, the licensee failed to ensure that procedures were adequate and accurate to assure nuclear safety (H.2(c)).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate a Condition Adverse to Quality Associated with Turbine-Driven Auxiliary Feedwater Pump 2P-29

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement prompt corrective actions for the degraded oil conditions initially identified with the Unit 2 2P-29 turbine-driven auxiliary feedwater (TDAFW) pump on September 24, 2007, following maintenance. Following an additional oil sample with favorable results, the licensee incorrectly concluded, due to confirmational biases, that the high water content of the first oil sample was an expected condition. The licensee wrote a condition report, but it was closed with no actions taken. In November 2007, the licensee identified that a significant degraded oil condition existed with the pump. The licensee entered the issue into its corrective action program and took immediate corrective actions, including rebuilding the pump turbine. The licensee continued to evaluate the causes and corrective actions to address this finding at the end of the inspection period.

The finding is more than minor because it could reasonably be viewed as a precursor to a significant event. Specifically, the failure to correct the cause of the oil degradation in a timely manner in September 2007 could have resulted in the failure of the 2P-29 TDAFW pump. The finding is of very low safety significance (Green) because there was no design deficiency, 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. Additionally, the inspectors determined that the finding had a cross-cutting area aspect in the area of problem identification and resolution. Specifically, the licensee failed to thoroughly evaluate the problem with water ingress into the oil, such that a resolution addressed the cause and extent of condition (P.1(c)).

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Guidance to Ensure the Operability of the Main Steam System During a Steam Generator Tube Rupture

The inspectors identified a Non-Cited Violation (NCV) of Technical Specification 5.4, "Procedures," for the failure to have adequate procedures to ensure the continued operation of the steam dumps to the condenser to maintain a Reactor Coolant System (RCS) cooldown during a Steam Generator Tube Rupture (SGTR) event. Specifically, the procedures permitted the operators to lock in a Safety Injection (SI) signal and then reset SI more than once, which could cause an automatic closure of the Main Steam Isolation Valves (MSIVs) and a loss of steam dump to the condenser, which could result in a delay in terminating the Primary-To-Secondary Leakage. The licensee has initiated procedure change requests to the SGTR emergency operating procedures as a corrective action for this finding.

This finding was more than minor because it was associated with the attribute of procedure quality, which affected the mitigating systems cornerstone objective of ensuring the availability and reliability of the Main Steam (MS) system to respond to initiating events to prevent undesirable consequences. Steam dump to the condenser is the preferred means of cooling the RCS during a SGTR because it minimizes radiological releases, conserves feedwater, and provides the most rapid cooldown capability. The finding is of very low safety significance based on the results of the SDP Phase 1 screening worksheet. The inspectors concluded that this finding was cross-cutting in the area of human performance, resources (H.2(c)), in that the licensee failed to have complete, accurate, and up-to-date procedures for the response to a SGTR event. This item was described in NRC Inspection Report 2007301, dated August 21, 2007, as Item Numbers 05000266/2007301-01 and 05000301/2007301-01.

Inspection Report# : [2007005](#) (pdf)

Significance:  Dec 14, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Factor of Safety Specified in Design Evaluation of Unit 1 SGBD HX Platform

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that was of very low safety significance involving a calculation that designed the Unit 1 Steam Generator Blowdown (SGBD) Heat Exchanger (HX) Platform to withstand a load from a postulated pipe whip of the condensate return line resulting from a High-Energy Line Break (HELB). The load from a postulated pipe whip applied to the platform was evaluated in calculation PBNP-994-10-S01, "SGBD HX Platform Mod. For Addition of Pipe Rupture Restraint for Condensate Return Line" which was approved on April 28, 2007. As a result of this calculation, the design function of the Unit 1 SGBD HX Platform was revised to hold and maintain the steam generator blowdown heat exchangers and condensate return line in position and assure that the platform did not fall onto the safety related Refueling Water Storage Tank (RWST) during a safe shutdown earthquake and a HELB simultaneously. Specifically, the licensee failed to correctly use the original design anchor bolt safety factor in the supporting calculation. This issue was entered into the licensee's corrective action program as condition report CAP 1118144.

The issue was more than minor because the calculation error would be expected to necessitate extensive calculation rework and possibly a modification in order to demonstrate that the platform meets design acceptance limits commensurate with those applied to original design. The finding screened as having very low safety significance (Green) because the inspectors answered "yes" to question 1 under the Mitigating Systems Cornerstone column of the Phase 1 worksheet. Specifically, the platform remained "operable but degraded". The cause of the finding was related to the cross-cutting element in Human Performance, Work Practices because the licensee did not ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported (item H.4(c) of IMC 0305). The licensee had failed to correctly use the original design anchor bolt safety factor in all three revisions of the design basis calculation.

Inspection Report# : [2007007](#) (pdf)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water System Microbiologically-Induced Corrosion through-Wall Leak Due to Inadequate Corrective Actions

A self-revealing finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to take prompt corrective action for microbiologically-induced corrosion (MIC) of the

service water (SW) piping. Specifically, the SW Inservice Inspection Program failed to identify SW pipe thinning prior to MIC causing a through-wall leak because the non-destructive examination method used, specifically radiography, was inadequate for detecting MIC. The limited ability for identifying MIC with radiography was a known problem and was previously documented in the licensee's corrective action program in 2005; however, prompt corrective actions were not taken. For the 2007 leak, the licensee took immediate corrective actions to replace the leaking SW pipe and proposed changes to the SW Inservice Inspection Program that would enhance the site's ability to identify potential sources of MIC in the SW system and correct the program issues initially identified in 2005.

The issue is greater than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition, if left uncorrected, the finding would become a more significant safety concern. The finding is of very low safety significance (Green) 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 (TS) allowed outage time, and no risk due to external events. Additionally, the inspectors determined that the primary cause of the finding is related to the cross-cutting area of problem identification and resolution. Specifically, under the component of corrective action program, the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct Previous Indication of Degraded Oil in Component Cooling Water Pump

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement prompt corrective actions for the degraded oil conditions initially identified with safety-related Component Cooling Water (CCW) Pump 1P-11B in March 2007. Following an additional oil sample with anomalous results in July 2007, the licensee declared the pump inoperable and performed troubleshooting and repair of CCW Pump 1P-11B. The licensee entered the issue into their corrective action program and took immediate corrective actions. The licensee continued to evaluate the causes and corrective actions to address this finding at the end of the inspection period.

The finding is greater than minor because it could reasonably be viewed as a precursor to a significant event. Specifically, the failure to promptly correct the cause of the oil degradation in a timely manner in March 2007 could have resulted in the failure of the CCW pump. Additionally, the finding is associated with the equipment performance attribute 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 finding is of very low safety significance (Green) because there was no design deficiency, 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. Additionally, the inspectors determined that the primary cause of the finding is related to the cross-cutting area of problem identification and resolution. Specifically, under the component of corrective action program, the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Calibration Methods for Engineered Safeguards Actuation System Instrumentation, Lead/Lag Time Constants for Steam Line Pressure

A self-revealing finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the failure to have adequate maintenance procedures for performing calibration of the Engineered Safeguards Feature Actuation System (ESFAS) instrumentation steam pressure compensator modules. Specifically, instructions were not correct or sufficiently detailed to determine mathematical values from graphical displays of circuit output used in performing the subject calibrations.

The finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating

Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is 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 TS allowed outage time, and no risk due to external events. The inspectors also determined that the primary cause of this finding is related to the cross-cutting area of human performance. Specifically, under the component of resources, the licensee failed to ensure complete, accurate and up-to-date procedures for calibration of the ESFAS instrumentation steam pressure compensator modules

Inspection Report# : [2007004](#) (*pdf*)

Significance: **G** Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for MOV Stalling Delays for ECCS Response Time Analysis

Inspection Report# : [2007004](#) (*pdf*)

Significance: **G** Jul 13, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Correct Non-Compliant Sprinkler Heads in the EDG Rooms

The inspectors identified a finding of very low safety significance and an associated NCV of the PBNP's Operating License for failure to take prompt corrective action for a condition adverse to quality. Specifically, in July 2002, the licensee identified that four sprinkler heads located in Fire Zones 308 and 309 (i.e., emergency diesel generator (EDG) rooms G-01 and G-02, respectively) were not in compliance with the NFPA 13-1966 Code, Section 3066. The violation was entered into the licensee's CAP as 01101421, "Untimely Corrective Actions," dated July 12, 2007, to increase the priority of the modification that was to correct the sprinkler heads' non-compliant condition. The finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective action to address the safety issue in a timely manner commensurate with its safety significance and complexity.

This finding was more than minor because the finding was associated with the protection against external factors (i.e., fire) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee's failure to promptly correct the lack of return bends condition for four sprinkler heads in the EDG rooms and take appropriate action to restore the operability of these sprinkler heads in a timely manner could have affected the suppression capability of the fire suppression systems in these rooms. The finding was of very low safety significance based on a Phase 2, SDP evaluation completed in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process." (Section 1R05.4b)

Inspection Report# : [2007006](#) (*pdf*)

Significance: N/A Jul 13, 2007

Identified By: NRC

Item Type: FIN Finding

Failure to Meet Separation Requirements for Redundant Trains

The inspectors identified a violation of 10 CFR Part 50, Appendix R, Section III.G.2, involving the licensee's failure to ensure, in the event of a severe fire, that one redundant train of systems necessary to achieve and maintain hot shutdown (HSD) conditions was free of fire damage. Specifically, in the event of a severe fire in Fire Zone 151 in Fire Area A02, the licensee failed to ensure that cables and/or circuits of one redundant train of charging pumps were adequately protected by a 20-foot separation with no intervening combustibles. The violation was entered into the licensee's corrective action program (CAP) as 01101444, "Compliance with Appendix R, Section III.G.2 in Fire Zone 151," dated July 12, 2007. The licensee initiated compensatory measures and will evaluate the violation during transition to NFPA 805. The inspectors determined there was no cross-cutting aspect to this finding.

This finding was more than minor because the finding was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage).

Specifically, the licensee's failure to ensure that cables and/or circuits of one redundant train of charging pumps were

adequately protected, by maintaining a 20-foot separation with no intervening combustibles, left the charging pumps' cables and/or circuits vulnerable to fire damage and did not ensure the availability and reliability of systems that respond to initiating events. Because the NRC-identified violation was a circuit-related finding that was not associated with a finding of high safety significance (Red), the inspectors evaluated the violation in accordance with the four criteria established by Section A of the NRC's Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR Part 50.48) for a licensee in NFPA 805 transition. The inspectors determined that for this violation: (1) the licensee would have identified the violation during the scheduled transition to 10 CFR Part 50, Section 48(c); (2) the licensee had established adequate compensatory measures within a reasonable time frame following identification and would correct the violation as a result of completing the NFPA 805 transition; (3) the violation was not likely to have been previously identified by routine licensee efforts; and (4) the violation was not willful. As a result, the inspectors concluded that the violation met all four criteria established by Section A, and the NRC is exercising enforcement discretion to not cite this violation in accordance with the NRC's Enforcement Policy. (Section 1R05.2b.1)

Inspection Report# : [2007006](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Work Instructions for Preventive Maintenance on Safety-Related Battery Chargers

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for failure to accomplish required preventive maintenance resulting in the D-108 Station Battery output becoming unstable on several occasions. In January 2007, the D-09 Battery Charger also failed as a result of failure to perform scheduled preventive maintenance. The licensee initiated condition reports, took immediate corrective actions to repair the chargers and is performing an apparent cause evaluation.

The inspectors concluded that the finding is greater than minor because if left uncorrected, the finding would become a more significant safety concern, in that, failures of safety-related battery chargers can significantly challenge the vital 125V DC system. In addition, the finding is associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, (such as, core damage). Since the finding is not a loss of system safety function and is not an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, the finding is considered to be of very low safety significance (Green). The inspectors also determined that the primary cause of this finding is related to the cross-cutting area of human performance (H.3(b)). Specifically, the licensee did not appropriately coordinate work activities to support long-term equipment reliability and maintenance scheduling, which was not more preventive than reactive, as critical preventative maintenance for battery chargers was not performed.

Inspection Report# : [2007003](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Program for Preventive Maintenance of Breaker Mechanism Operated Control Switches

The inspectors identified a NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," of very low safety significance (Green), for the failure to incorporate available internal and external Operating Experience (OE) pertaining to 4.16kV switchgear cubicle Mechanism Operated Control (MOC) switch assemblies. Preventive maintenance procedures for Westinghouse 4.16kV switchgear cubicles had not been revised to incorporate important MOC switch linkage measurements, adjustments and verification of contact position. The licensee initiated condition reports and is revising procedures to incorporate required preventive maintenance.

The inspectors concluded that the finding is greater than minor, because, if left uncorrected, the finding would become a more significant safety concern. The finding also affects the procedure quality attribute of the Mitigating System cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (such as, core damage). Since the finding is not a loss of system safety function and is not an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, the finding is considered to be of very low safety significance (Green). Additionally, the inspectors determined that the contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution

within the component of OE (P.2(b)). The licensee did not implement or institutionalize OE through changes to station processes and procedures, as appropriate preventive maintenance procedures and routines were not established. Inspection Report# : [2007003 \(pdf\)](#)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to have Procedures Appropriate to the Circumstances for Terry Turbine Overhauls

The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to ensure that procedures associated with the maintenance of the TDAFW turbines were appropriate to the circumstances. Specifically, the licensee's maintenance overhaul procedure did not address the following significant issues: 1) specify acceptance criteria and as-left requirements for thrust bearing axial clearance; 2) specify instructions to ensure the proper setting and critical dimensions for the proper pump to turbine coupling stretch; 3) correctly establish the turbine to wheel nozzle lap setting; and 4) specify proper placement of insulation on the turbine. The licensee entered the issue into their corrective action program and took immediate corrective actions. At the end of the inspection period the licensee continued to evaluate the causes and corrective actions to address this finding.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern. In addition, it affected the Mitigating Systems attributes of equipment performance availability and reliability, and maintenance procedure quality, as well as the Mitigating Systems cornerstone objective of ensuring the reliability of systems. The inspectors determined this programmatic finding was not a design qualification deficiency resulting in a loss of function per Generic Letter 91-18, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding was considered to be of very low safety significance (Green). The primary cause of this finding was related to a cross-cutting aspect in the area of human performance because the licensee failed to ensure that procedures were adequate and accurate to assure nuclear safety (H.2(c)).

Inspection Report# : [2007008 \(pdf\)](#)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

Failure to have Specific Formal Training for Maintenance Craft on Terry Turbine Overhauls

The inspectors identified a finding of very low significance (Green) with no associated violation for the failure to provide appropriate training for maintenance personnel performing overhauls on the TDAFW pump turbines. Specifically, while maintenance personnel received training on some of the individual components associated with a turbine, the mechanic-electrician (mechanical) training program did not require specialty task training for turbine overhauls. In addition, this was contrary to standard industry guidelines for training and qualification of maintenance personnel. The licensee entered the issue into their corrective action program and took immediate corrective actions. At the end of the inspection period the licensee continued to evaluate the causes and corrective actions to address this finding.

The finding was more than minor because, if left uncorrected, the issue would have become a more significant safety concern. In addition, it affected the Mitigating Systems attributes of equipment performance availability and reliability, and to pre-event human error, as well as the Mitigating Systems cornerstone objective of ensuring the reliability of systems. The inspectors determined this programmatic finding was not a design qualification deficiency resulting in a loss of function per Generic Letter 91-18, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding was considered to be of very low safety significance (Green). The primary cause of this finding was related to a cross-cutting aspect in the area of human performance because the licensee failed to assure that training of personnel was adequate to assure nuclear safety (H.2(b)).

Inspection Report# : [2007008 \(pdf\)](#)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to have Procedures Appropriate to the Circumstances for the Analysis and Sampling of Safety-Related Turbine and Pump Oil

The inspectors identified a finding of very low safety significance (Green) and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement an oil analysis program for the TDAFW pump. The inspectors identified that the licensee failed to implement sampling guidelines using industry standards or provide an adequate justification for not performing the samples at reasonable intervals. The licensee entered the issue into their corrective action program and took immediate corrective actions. At the end of the inspection period the licensee continued to evaluate the causes and corrective actions to address this finding.

The finding was more than minor because if left uncorrected, the failure to have an adequate procedure for lubrication could result in the TDAFW pump being degraded without the knowledge of the licensee. The inspectors determined the finding did not result in an actual loss of safety function of a system or train of equipment; therefore, the finding was considered to be of very low safety significance (Green). The primary cause of this finding was related to a cross-cutting aspect in the area of human performance because the licensee did not ensure that procedures were adequate and accurate to assure nuclear safety (H.2(c)).

Inspection Report# : [2007008](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement a Quarantining Process

The inspectors identified a finding of very low safety significance (Green) and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately quarantine a component for subsequent causal analysis. The inspectors identified that the licensee failed to implement procedural controls to quarantine degraded components during troubleshooting and maintenance activities which resulted in the loss of evidence for causal analysis. The licensee entered the issue into their corrective action program, implemented interim quarantine controls, and issued a new Procedure, NP 1.1.17 "Quarantine of Areas, Equipment, and Records."

The finding was more than minor because if left uncorrected, the failure to properly quarantine items could become a more significant safety concern, since the failure to do so could impede the identification of causes for conditions adverse to quality and prevent the implementation of appropriate corrective actions. The inspectors determined the finding was not a design qualification deficiency resulting in a loss of function per Generic Letter 91-18, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, the finding was considered to be of very low safety significance (Green). The primary cause of this finding was related to a cross-cutting aspect in the area of human performance because the licensee did not ensure that procedures were adequate and accurate to assure nuclear safety (H.2(c)).

Inspection Report# : [2007008](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Prompt Corrective Actions for Conditions Adverse to Quality Associated with the PAB Crane

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the license's failure to implement prompt corrective actions for the degraded conditions initially identified with the single failure proof primary auxiliary building crane by maintenance personnel on January 17, 2008. As a result, on March 4, while a new fuel storage canister was being lowered in a laydown area after traversing the width of the spent fuel pool, the crane failed to the safe position with the load suspended approximately one foot off the floor. In a review of work order and corrective action history, the inspectors determined that all of the degraded conditions from January were not corrected during maintenance on February 21. The licensee entered the issue into its corrective action program and took immediate corrective actions,

including repair of the crane. The licensee continued to evaluate the causes and corrective actions to address this finding at the end of the inspection period.

The finding is more than minor because it could reasonably be viewed as a precursor to a significant event. Specifically, the failure to correct the degraded condition of the primary auxiliary building crane resulted in the failure of the single failure proof crane while in use to move loads over the spent fuel pool. The finding affected the Barrier Integrity Cornerstone and is of very low safety significance (Green) because this spent fuel pool issue did not result in the loss of spent fuel pool cooling, did not result in damage to fuel clad integrity in the spent fuel pool, and did not result in a loss of spent fuel pool inventory. This finding has a cross cutting aspect in the area of problem identification and resolution because the licensee did not take appropriate corrective actions in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2008002](#) (pdf)

Significance:  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Piping Anchor Design not in Conformance with Design Basis Code Requirements

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate service water piping to pipe anchor integral welded attachments in conformance with the design requirements of the design basis American Society of Mechanical Engineers Boiler and Pressure Vessel Code. The licensee entered this issue into its corrective action program.

This finding is more than minor because it's associated with the design control attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective to maintain the structural integrity of the service water system, structures, and components and the operational capability of the containment fan coolers. The finding was of very low safety significance (Green) based on a Phase 1 screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," and Appendix H, "Containment Integrity Significance Determination Process," because pressurized water reactor containment fan coolers impact late containment failure and source terms, but not large early release frequency. There was not a cross-cutting aspect to this finding.

Inspection Report# : [2008002](#) (pdf)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Appropriate Test conditions for Leak-Rate Testing Outside Containment

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to have procedures appropriate to the circumstances, which established the appropriate test conditions for primary coolant sources testing outside containment. Specifically, testing procedures, which satisfied Technical Specification 5.5.2, "Primary Coolant Sources Outside Containment," did not ensure that residual deposits of boric acid on the containment spray, high head and low head safety injection systems were removed, so that active system fluid leaks could be identified as required during the tests. The issue was entered into the licensee's corrective action program (CAP), the licensee took immediate corrective actions, and performed a causal evaluation at the end of this inspection.

The inspectors evaluated the finding using IMC 0609, "Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The finding screened as very low safety significance (Green) because the finding did not: represent the degradation of the radiological barrier function provided for the auxiliary building; represent a degradation of the barrier function of the control room; and did not represent an actual open pathway in the physical integrity of reactor containment. The inspectors also determined that the primary cause of this finding is related to the cross-cutting area of human performance (H.2(c)). Specifically, under the component of resources, the licensee failed to ensure that procedures were adequate and accurate to assure nuclear safety.

Inspection Report# : [2007003](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: SL-IV Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate 10 CFR 72.48 Screening to Evaluate Possible Thermal Effects on Fuel Cladding

The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 72.48(c)(1) for the licensee's failure to obtain a Certificate of Compliance (CoC) amendment pursuant to 10 CFR 72.244, for changes made in the spent fuel storage cask operating procedures during the 2004 loading campaign as described in the Final Safety Analysis Report. The procedure changes constituted a change in the terms, conditions, or specifications incorporated in the CoC. Although the procedures were contained in the Final Safety Analysis Report, the licensee failed to identify that TS 1.2.17a, "32PT Dry Storage Canister (DSC) Vacuum Drying Duration Limit," was also affected by the procedure change and required prior NRC approval. The licensee implemented corrective actions, which included revising the loading procedure to reflect the sequence described in the FSAR prior to the next cask loading campaign.

This finding is more than minor because it had the potential to impact the NRC's ability to perform its regulatory function, since the licensee failed to receive NRC approval for a change in this licensed activity. The inspectors determined that the finding was not suitable for SDP evaluation because the noncompliance involved 10 CFR Part 72 dry fuel storage activities. Therefore, this finding was reviewed by regional management and dispositioned using traditional enforcement. The finding was determined to be of very low safety significance.

Inspection Report# : [2007005](#) (*pdf*)

Significance: N/A Dec 31, 2006

Identified By: NRC

Item Type: AV Apparent Violation

NRC to Review Items in Confirmatory Order Dated January 3, 2007, for Employment Discrimination Settlement

In a letter dated January 3, 2007 (ADAMS Accession Number ML063630336), the NRC issued a Confirmatory Order to the licensee as part of a settlement agreement through the NRC's Alternative Dispute Resolution (ADR) process. The NRC investigated an alleged violation of 10 CFR 50.7, "Employee Protection," to determine whether a senior reactor operator was the subject of retaliation for raising a nuclear safety concern in the licensee's corrective action program. This issue was resolved through the NRC's ADR program and will be tracked as Apparent Violation (AV) 05000266/2006013-05; 05000301/2006013-05 pending NRC review of the licensee's completion of items specified in the Confirmatory Order.

Inspection Report# : [2006013](#) (*pdf*)

