

Kewaunee

4Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Maintenance Rule (a)(1) in Corrective Actions on the "G" Instrument Air Compressor

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.65(a)(1), "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." Specifically, as of August 25, 2007, the licensee failed to implement the Maintenance Rule (a)(1) action plan which had been incorporated into plant procedure N-AS-01 to preclude a loss of the "G" air compressor. The licensee entered the issue into their corrective action program. Corrective actions have included implementation of the procedural requirements of N-AS-01 for both the "G" and "F" air compressors.

The finding is greater than minor because it relates to a licensee failure to implement prescribed significant compensatory measures to manage risk and implement the 10 CFR 50.65(a)(1) action plan. Additionally, the finding 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 inspectors evaluated the finding using Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process," and determined that this finding is of very low safety significance by answering "No" to all questions in the Initiating Events Cornerstone column.

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

No Analysis or Procedures to Establish Operability of the TAT Source

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to evaluate the capability of the 345 kV offsite power supply when isolated from the 138 kV switchyard and to translate this criteria into procedures.

This issue was more than minor because procedures allowed operation of the station in unanalyzed configurations for which operability of one offsite source could not be assured and new calculations were needed to ensure that the design basis was met. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Incorporate and Effectively Implement Operating Experience in RTB Maintenance Activities

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR 50.65(a)(3) for the failure to incorporate external and internal operating experience into preventive maintenance activities for the reactor trip breakers. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program because the licensee did not thoroughly evaluate previous breaker issues and did not perform adequate extent of condition reviews. Specifically, the licensee initiated several corrective action documents in response to identified issues; however, did not perform adequate evaluations of the conditions to address the cause or resolve the identified issue. (P.1.(c))

This issue was more than minor because the licensee failed to ensure that the RTBs, and their associated cell assemblies, had been maintained in a continuous state of operational readiness by performing effective maintenance and surveillance activities in accordance with relevant vendor specifications and available operating experience. The issue was of very low safety significance based on a Phase 1 screening because 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.

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Acceptance Criteria Not Met Due to Failure to Follow Procedure

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." Specifically, on May 22, 2006 during the performance of PMP-47-01, maintenance technician recorded a trip bar force of 32 ounces when testing RTB S/N 850-027-1, which exceeded the acceptance criteria; however, no further actions were taken as required by the test. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not perform an adequate peer check of the surveillance results. Specifically, several individuals including the person performing the task did not identify that the RTB trip bar force exceeded the acceptance criteria. (H.4.(c))

This issue was more than minor because not meeting the acceptance for the trip bar force impacted the reliability of the RBTs because excessive force could result in a failure to trip the breaker. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Implement E-0-05, "Response to Natural Events," During a High Wind Advisory

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 implement procedure E-O-05, "Response to Natural Events," during a high wind advisory. Specifically, on February 22, 2007, during the advisory, the inspectors identified several items stored outdoors near the plant main output transformer that could become missile hazards during actual high winds. As part of corrective actions, the licensee removed the items. The issue was entered into the licensee's corrective action program.

The inspectors determined that the finding is greater than minor because, if left uncorrected, the loose items could become a more significant safety concern by allowing the accumulation of missile hazards in these areas, thereby increasing the likelihood of an initiating event. The inspectors determined that the finding warranted evaluation using the Significance Determination Process (SDP) because the finding was associated with an increase in the likelihood of an initiating event. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance because the licensee failed to communicate decisions and the basis for decisions to personnel who have a need to know the information in order to perform work safely and in a timely manner.

Inspection Report# : [2007002](#) (*pdf*)

Mitigating Systems

Significance: SL-IV Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Update the Updated Safety Evaluation Report

The inspectors identified a finding of very low safety significance for the licensee's failure to adequately update the Updated Safety Analysis Report (USAR) in accordance to 10 CFR 50.71, "Maintenance of records, making of

reports.” The licensee failed to update the USAR to fully reflect changes and analyses made in response to license amendment 184. Once identified, the licensee entered this issue into its corrective action program.

Because this issue potentially impacted the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. The finding is greater than minor because of the failure to provide complete licensing and design basis information in the USAR could result in either the licensee making an inappropriate licensing interpretation or the NRC making an inappropriate regulatory decision based on incomplete information in the USAR. The issue is of very low safety significance based upon a Phase 2 significance determination analysis of the associated technical issue. The issue was a NCV of 10 CFR 50.71(e), which required that the USAR be updated to include the effects of all safety evaluations performed by the licensee in support of requested license amendments. The primary cause of this violation is related to the cross-cutting area of problem identification and resolution because the extent of condition review performed for a recent and similar violation failed to identify the issue even though it was within the scope of the extent of condition review which had been performed

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

Significance: SL-IV Jun 30, 2007

Identified By: NRC

Item Type: VIO Violation

Failure to Perform a 10 CFR 50.59 Evaluation for Compensatory Measures Associated with a Procedure Change

The inspectors identified a finding having very low safety significance and an associated Severity Level IV, Cited Violation of 10 CFR 50.59 while reviewing unresolved items URI 05000305/2006003-04, “Adequacy of Compensatory Actions for Potential Turbine Missile Strike of Control Room Ventilation Cooling”; and URI 05000305/2006016-01, “Adequacy of 10 CFR 50.59 Screening for Procedure Change.” Specifically, the licensee failed to properly interpret design and licensing basis requirements associated with protection against external events and as a result did not perform a 10 CFR 50.59 evaluation. The cause of this finding is related to the cross-cutting area of problem identification and resolution because the licensee had similar prior problems that, if effectively evaluated and resolved, could have prevented this issue. (P.1(c))

This finding was determined to be more than minor because the inspectors determined that the procedure change would have ultimately required NRC approval. The procedure changes, in the form of compensatory operator actions, adversely impacted the operation of control room recirculation system following a tornado. A Phase 1 significance determination of this finding using IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Severe Weather Screening Criteria questions was completed. Since the loss of the control room recirculation system would not result in an initiating event or degrade two or more trains of a multi-train safety system, the issue screened as Green.

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

Significance:  May 18, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Procedure Non-Compliance

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for failure to adequately implement procedure DNAP-1604, “Cause Evaluation Program,” and the Cause Evaluation Handbook during investigative analyses of root cause, collective significance, and apparent cause evaluations. The licensee subsequently revised several apparent cause evaluations (ACEs), such as ACE 3374 on the diesel generator B fuel rack shaft binding, and completed industry benchmarking to improve root cause evaluation and ACE investigative analysis.

This finding was associated with the Mitigating Systems Cornerstone. The finding was more than minor because, if left uncorrected, the licensee’s analyses of conditions adverse to quality, such as the investigation of the diesel generator B fuel rack shaft binding, as documented in ACE 3374, would not be performed at an appropriate investigative depth for cause determination. The inspectors assessed the significance of this finding as very low safety significance (Green) because the finding did not represent an actual loss of safety function of the equipment. The finding was associated with cross-cutting aspect P.1(c), in the area of problem identification and resolution, corrective action program, because the licensee failed to thoroughly analyze the sequence of events and the cause and effect relationships potentially impacting the causal determination of CAP evaluations.

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

No Motor Starting Analyses for Offsite Power Supply

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to perform motor starting studies to demonstrate that motors would successfully start when connected to the offsite power supply. Upon discovery, the licensee provided additional data and compensatory measures to justify operability.

The inspectors determined that the performance deficiency was more than minor because the lack of a formal motor starting calculations resulted in the adequacy of important aspects of the design not being demonstrated, such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability, at the time of discovery there was reasonable doubt on the operability of motors. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Increased Cable Resistance Due to Accident Temperatures

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to consider the effects of accident temperatures on cable resistance in voltage drop calculations. Upon discovery, the licensee performed preliminary calculations to verify operability of the circuits.

This issue was more than minor because the calculational errors had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of the circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Adequate 125 Vdc Breaker Interrupting Short Circuit Current Capability

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to ensure that four of the 125 VDC circuit breakers had adequate interrupting short circuit fault current capability. Upon discovery, the licensee performed a preliminary evaluation, and verified that the most likely fault would result in a lower short circuit fault current than the breakers rating.

This issue was more than minor because the failure could have affected the operability of the breaker/DC Bus and could have resulted in the loss of DC power to safe shutdown equipment in the event of short circuit faults. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

G**Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Use Actual Minimum Voltage Value in 125Vdc Voltage Drop Calculation

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to use correct design input data into the 125 VDC safeguard battery calculation. The licensee used a battery terminal voltage value of 117.49 volts for BRA-101 and 118.95 volts for BRB-101, for the first minute, and did not compensate for worse case conditions. Upon discovery, the licensee performed preliminary evaluation and verified that safe shutdown equipment have adequate voltage using the battery terminal voltage value of 113.87 volts.

This issue was more than minor because the failure to use correct design input had more than a minimal effect on the outcome of the voltage drop calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that equipment could perform its safety function. Although, during the inspection, the licensee was able to demonstrate operability; at the time of discovery there was reasonable doubt on the operability of circuits. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Inspection Report# : [2007006](#) (*pdf*)**G****Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Acceptance Criteria in 125 Vdc Station Battery Load Tests Procedures

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings." Specifically, the licensee failed to include the acceptable minimum battery terminal voltage, during the first minute, into the acceptance criteria for battery load test procedures SP-38-102A/B "Station Battery Load Test." Upon discovery, the licensee entered the issue into its corrective action program to revise the acceptance criteria of procedures SP-38-102A/B to include this requirement.

This issue was more than minor because the failure to ensure that the battery terminal voltage during the first minute battery discharge did not drop below the design input value could have affected the operability of safety related equipments in the event of a design basis accident and or station blackout conditions. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Inspection Report# : [2007006](#) (*pdf*)**G****Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Adequate Control Voltage for 4160V Breaker's Closing Coil was not Assured

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to assure that the minimum available control voltage at the 4160V breakers was adequate to energize the closing coils during all conditions. Upon discovery, the licensee performed preliminary calculation and verified operability of the emergency diesel generators 4160V breakers following loss of all AC power conditions.

This finding was more than minor because the failure to assure adequate control voltage was available to close the 4160V breakers would have affected the capability of emergency diesel generators and other safety related equipments to respond to initiating events. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

G**Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Safeguard Battery Load Profile Did Not Include LOOP/LOCA Loads

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" having very low safety significance for the licensee's failure to assure that safeguard battery loads profile was adequate to meet all USAR requirements. Specifically, the licensee failed to verify that the battery loading profile for loss of coolant accident (LOCA) coincide with loss of all AC power condition was bounded by the station blackout condition loading to ensure adequate battery sizing and testing. Upon discovery, the licensee was able to show that the charger will be available upon the start of the emergency diesel generator and will provide additional support. This issue was entered into the licensee's corrective action program to revise the battery calculation to include the LOCA loads.

This finding was more than minor because the failure to include the LOCA loads in the battery sizing and testing did not ensure the capability of the battery to provide adequate DC power in accordance with USAR requirements. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Inspection Report# : [2007006](#) (pdf)**G****Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Electrolytic Capacitors in Spare Safeguard Battery Charger Not Periodically Energized

The inspectors identified a finding having very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." Specifically, the licensee failed to incorporate previously identified vendor recommendation to periodically energize the spare 125 VDC safeguard battery charger for at least a half-hour every 18 months to ensure the operability of the electrolytic capacitor in the charger. The licensee has previously entered the vendor recommendation into their corrective action in 2002, however, all actions were closed but the recommendation was never implemented. Following discovery, the licensee entered the issue into its corrective action program and declared the spare charger inoperable. The primary cause of this violation was related to the cross-cutting area of problem identification and resolution because the licensee failed to take appropriate corrective actions to address a previously failed charger. Specifically, the licensee developed corrective actions which included incorporating pertinent vendor recommendation into the preventive maintenance program but closed the action without ensuring completion (P.1.d)

This issue was more than minor because the failure to periodically energize the spare charger did not ensure the operability and reliability of the spare charger when needed. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Inspection Report# : [2007006](#) (pdf)**G****Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Diesel Loading Calculations Non Conservative

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to properly account for all loads on the diesel generators. Upon discovery, the licensee provided additional data and initiated procedure changes to ensure diesels were loaded within their ratings.

The inspectors determined that the performance deficiency was more than minor because the lack of adequate diesel generator loading calculations resulted in some diesel loads not being properly accounted for, such that further evaluation needed to be performed in order to demonstrate that the equipment could perform its safety function. Although, by the end of the inspection, the licensee was able to demonstrate operability, at the time of discovery there was reasonable doubt on the operability of equipment. The inspectors screened the finding using IMC 0609, Appendix A. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609,

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Significance: Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

RWST Level Instruments Do Not Protect SI and RHR Pumps from Excessive Air Entrainment

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to incorporate the results of design calculations with respect to minimum refueling water storage tank (RWST) level and transfer of suction sources into the appropriate emergency operating. Procedures allowed operators to transfer suction at 4 percent indicated level in the RWST; however, at this level, significant air entrainment may damage the pumps. This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not thoroughly evaluate problems such that the resolution addresses the extent of condition (P.1.c).

This issue was more than minor because the existing margin was already low and as a consequence, the large error associated with the level instrument resulted in eliminating the entire margin, and jeopardized the functionality of the pumps taking suction from the RWST due to excessive air entrainment. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations" SDP Phase 1.

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

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Significance: Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Assumption Used in Service Water Flow Model Calculation

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to appropriately account for service water strainer plugging in the service water system flow model. Upon discovery, the licensee placed this issue into their corrective action program and planned to formally revise the service water system flow model to reflect plugging of both strainers in a train.

The issue was more than minor because the error had more than a minimal effect on the outcome of the calculation, considerably impacting the available margin of the system such that further evaluation needed to be performed in order to demonstrate that the service water system could perform its safety function. The issue was of very low safety significance because the issue was a design issue confirmed to not result in a loss of operability.

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

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Significance: Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Screen House Ventilation Damper Maintenance

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Paragraph (b)(2), for the licensee's failure to scope the closing function of the screenhouse ventilation dampers into the monitoring program. Specifically, the degraded screen-house dampers fail to close and maintain ambient temperatures > 60 °F such that service water system would remain operable and available after a station blackout event with severely cold outside temperatures. Following discovery, the licensee entered the issue into its corrective action program for resolution.

This issue was more than minor because the licensee had not included the closing function of the screen-house ventilation dampers within the scope of its program for implementation of the Maintenance Rule. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

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

G**Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Non Conservative Assumption Used for "B" CCW Pump Room Heat Gain Calculation

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III. Specifically, the licensee failed to account for component cooling water (CCW) piping temperatures as high as 176°F in the CCW "B" pump room and the impact upon the temperature in the CCW "B" pump room. As a result, the licensee used the non-conservative results in an operability evaluation for the auxiliary building fan coil unit (FCU). Upon discovery, the licensee placed this issue into their corrective action program, performed an immediate operability evaluation, and planned to perform a more thorough evaluation. This finding has a cross-cutting aspect in the area of human performance associated with decision making because the licensee did not use conservative assumptions. Specifically, the licensee failed to account for higher CCW piping temperatures because the licensee did not model the CCW room properly and did not use the maximum expected temperature under accident conditions when revising calculation C11156 (H.1.b).

The issue was more than minor because the error because, if left uncorrected, the finding would become a more safety significant concern. The use of a non-conservative value as a basis for operability could allow FCU performance to degrade to unacceptable levels without being detected and corrected. The issue was of very low safety significance because the issue was a design issue confirmed to not result in a loss of operability.

Inspection Report# : [2007006](#) (*pdf*)**G****Significance:** Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Safety Injection Pump Lube Oil Coolers Testing deficiencies

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." Specifically, the licensee failed to establish a testing program capable of identifying an unacceptable condition of the safety injection (SI) lube oil coolers. Upon discovery, the licensee initiated a change to the test program methodology and performed back-flushing and inspection on the two SI lube oil coolers. The licensee also assessed that as a result of the very cold temperature of the water of Lake Michigan during the inspection, the cooler was considered operable. This finding has a cross-cutting aspect in the area of problem identification and resolution associated with self- and independent assessments because during a 2005 audit of licensing commitments, the licensee failed to identify that the commitment to perform inspection and maintenance of the SI lube oil coolers in accordance with the licensee's response to Generic Letter 89-13 was not kept (P.3.a).

This issue was more than minor because when later assessed, the licensee realized that the coolers would have failed previous tests when reevaluated performance factors were less than the acceptance criterion of 0.9. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."

Inspection Report# : [2007006](#) (*pdf*)**G****Significance:** Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inappropriate QA Class Components Installed in TSC Diesel Generator

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of Technical Specification 6.8, "Procedures," during a review on January 27, 2007, of maintenance performed on the station blackout diesel generator. The maintenance, which was conducted to repair a cooling water leak, inappropriately replaced existing parts with commercial grade components. The inspectors determined that, in accordance with procedure GNP-01.01.01, "Determination of Nuclear Safety Designed Classifications, QA [Quality Assurance] Type and EQ [Environmental Qualification] Type," the new components should have been designated as "augmented quality." As part of corrective actions, the licensee revised its parts database to show the appropriate classification for parts for the diesel. The issue was entered into the corrective action program.

The inspectors determined that the finding is greater than minor because it was associated with the design control

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 installation of parts in equipment with a lower quality designation than required potentially impacted equipment reliability. The finding was determined 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 failed to take timely effective corrective actions for a similar prior occurrence. Barriers to prevent recurrence had not been established during supervisory reviews that granted multiple extensions to the corrective actions for the prior occurrence.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Nuclear Instrument Test Performed Contrary to Procedural Requirements

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of Technical Specification 6.8, "Procedures," when the licensee failed, on January 8, 2007, to follow procedures for performing the monthly surveillance test on power range instrument N-42 and failed to obtain an approved procedure change as required by administrative procedures when the technicians established an alternate ground point contrary to procedural requirements. As part of corrective actions, the licensee counseled the technicians involved and discussed the event with all members of the instrument and control department. The issue was entered into the corrective action program.

The inspectors determined that the finding is greater than minor because it was associated with the procedure quality 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 procedure required the use of the ground associated with the related card to verify proper continuity within the circuit and the use of an alternate ground point was a substantive change to the procedure. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance because personnel did not follow procedures.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Seismic Storage requirements in Station Housekeeping Procedure

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," during a review of procedures related to the control and storage of material. On March 21, 2007, the inspectors identified a number of unsecured equipment carts located in the vicinity of the seismically-classified, safety-related auxiliary building special ventilation system. The inspectors concluded that, although this was allowed by plant procedure GNP-01.31.01, "Plant Cleanliness and Storage," it was a condition that potentially affected quality (safe operation of the ventilation system during a seismic event) and should not have been allowed by the procedure. As part of corrective action, the licensee properly secured the carts and evaluated other carts positioned near safety-related equipment. The issue was entered into the corrective action program.

The inspectors determined that the finding is greater than minor because it was associated with the procedure quality 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 procedure allowed uncontrolled storage of materials in the vicinity of the auxiliary building special ventilation system that could render the system inoperable during a seismic event. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance because the licensee failed to provide accurate procedures to assure the operability of safety-related equipment was maintained.

Inspection Report# : [2007002](#) (*pdf*)

G**Significance:** Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Potentially Inadequate Design of the Service Water System

The inspectors identified a finding of very low safety significance (Green) and associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings," when the licensee failed to have in place adequate procedures to preclude a common mode failure of both trains of the safety-related service water (SW) system. Specifically, adequate procedures were not established for the maintenance of the SW system to prevent corrosion and degradation of the plant equipment water (PEW) filter vessels from affecting the safety-related SW bearing water supply components. As part of corrective actions, the licensee wrote the appropriate maintenance procedures. The issue was entered into the corrective action program.

The inspectors concluded that this finding is greater than minor because it was associated with the procedure quality and equipment 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. Specifically, the lack of appropriate procedures allowed the degradation of PEW components to cause the inoperability of two safety-related SW pumps. The finding was determined to be of very low safety significance. This finding has a cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions addressed causes and extent of condition, as necessary. Inspection Report# : [2007002](#) (*pdf*)

G**Significance:** Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Foreign Material in Containment as a Result of Inadequate Containment Closure Inspections

The inspectors identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of Technical Specification 6.8, "Procedures," on February 28, 2007, when the licensee failed to adequately perform a containment closeout inspection to ensure that debris and foreign materials were identified and removed in accordance with plant procedures. Specifically, inspectors identified unsecured metal sheets inside containment during a walkdown. As part of corrective actions, the sheets were removed from containment. The issue was entered into the corrective action program.

This finding is greater than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to identify and remove the steel sheets from containment could have affected the availability of both trains of the residual heat removal system (the accident recirculation sump) during a loss-of-coolant accident because of increased debris generation caused by the unsecured sheets. The finding was determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance because personnel did not follow procedures, causing a condition to exist that potentially impacted the operability of both trains of the residual heat removal system.

Inspection Report# : [2007002](#) (*pdf*)**Significance: SL-IV** Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Notify NRC of Licensee medical Condition Change in Accordance with 10 CFR50.74

The inspectors identified a finding of very low safety significance and an associated Severity Level IV, Non-Cited Violation of 10 CFR 50.74 for the licensee's failure to notify the NRC that one of its licensed operators was taking prescribed medication for a potentially disqualifying medical condition (hypertension). After a review of the licensed operator's medical status was completed by the NRC's medical review officer, a condition was added to the operator's license requiring him to take the medication as prescribed. The facility licensee entered this issue in their corrective action program. They required the individual licensed operator to take the medication as prescribed and incorporated these lessons learned in their requalification training program to ensure all licensed operators are aware of the requirement to notify the NRC of changes in their medical status.

Because violations of 10 CFR 50.74 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 was determined to be greater than minor because the medical condition that was not reported required a change to the operator's NRC license. Because the operator was always in the presence of other licensed operators while performing licensed duties and made no operational errors while he was taking the prescribed medication before his license had been appropriately revised, NRC management has determined this issue is a Green finding, of very low safety significance. This issue is considered an NCV because it was entered into the licensee's corrective action program. This finding also has a cross-cutting aspect in the area of human performance because a standard, specifically American National Standards Institute/American Nuclear Society (ANSI/ANS) 3.4, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," was available but not correctly implemented. The correct implementation of the standard would have led to a proper notification of the NRC and timely conditioning of the operator's NRC license.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Jan 31, 2007

Identified By: NRC

Item Type: VIO Violation

Failure to Evaluate Operability of the "A" EDG when a Fuel Oil Leak was Identified

A finding that was preliminarily determined to be of substantial safety significance (Yellow), and an associated apparent violation of Technical Specification 6.8, "Procedures," was identified for a fuel oil leak on the "A" emergency diesel generator (EDG) that was identified on June 28, 2006, but was not repaired until 51 days later on August 17. In December 2006, the licensee tested the fitting and copper tubing that was the source of the leak to assess the leak's effect on the operability of the diesel. The licensee concluded that the leak rendered the diesel inoperable for those 51 days. As part of corrective action, the licensee replaced the leaking fuel oil line and reinforced with plant personnel the procedural requirements to properly evaluate equipment problems. The licensee also entered the issue into its corrective action program.

The finding was more than minor because if left uncorrected it would become a more significant safety concern during use of the "A" EDG to mitigate a loss of offsite power event. Specifically, the "A" EDG would have failed after approximately four hours due to the loss of fuel oil through the failed fuel line tubing, and the systems that respond to accidents and are powered by the "A" EDG would not be available. A Significance Determination Process Phase 3 risk analysis preliminarily determined that this finding was of substantial safety significance (Yellow). This finding has a cross-cutting aspect in the area of human performance because procedures were available, but not followed, that could have resulted in the leak being promptly repaired.

After considering the information developed during the inspection, the NRC has concluded that the inspection finding is appropriately characterized as Yellow, i.e., an issue with substantial safety significance that will result in additional NRC inspection and potentially other NRC action.

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

Inspection Report# : [2007009](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Preconditioning of Safety-Related Motor-Operated Valves Prior to Performance of Technical Specification Required Surveillance Testing

The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," during plant preparations to perform Surveillance Procedure SP-23-100B, "Train B Containment Spray Pump and Valve Test - IST." Specifically, the inspectors noted on August 8, 2007, that shortly prior to performing the surveillance procedure, the plant had hung safety tags on the containment spray system in order to perform repair activities on IDS-102, a check valve in that

system. These tags required that normally open motor-operated valves IDS-202 and IDS-2B be cycled closed and tagged in order to isolate the check valve. Because these motor-operated valves were required to be stroke and time-tested during the performance of the surveillance procedure, and the effects of preconditioning on these valves was not considered prior to implementation of the maintenance activity, the inspectors determined that plant procedures were inadequate to assess preconditioning implications associated with station activities. The licensee entered the issue into their corrective action program. Corrective actions included completion of the surveillance procedure with acceptable results and an evaluation of the test results, which determined that the surveillance test was acceptable.

The finding is greater than minor because it was associated with the configuration control attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, Appendix A, "Significance Determination Process," and determined that this finding is of very low safety significance by answering "No" to all questions in the containment barriers cornerstone column. 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, procedures to assess and prevent preconditioning of safety-related components were not complete, accurate, and up-to-date

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

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Surveillance Testing of Auxiliary Building Special Ventilation Zone

The inspectors identified a finding having very low safety significance and an associated non-cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," while reviewing surveillance testing procedures for the auxiliary building special ventilation zone (Zone SV). Specifically, the licensee procedure for tracking the amount of in-leakage into the Zone SV did not have adequate criteria to capture degraded conditions, nor ensure that the acceptance criteria reflected the design requirements of the system. The cause of this finding is related to the cross-cutting area of problem identification and resolution because the licensee failed to properly evaluate multiple condition reports for operability and extent of condition. (P1(c))

This finding was determined to be more than minor because, if left uncorrected, the failure to evaluate barrier breaches that did not have breach permits could become a more significant safety concern. Specifically, if left unmonitored the breaches without barrier permits could potentially exceed the allowable design limits. The finding was evaluated using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The answer to Question 1 in the Significance Determination Process Phase 1 Screening Worksheet in the Containment Barrier Cornerstone column was "yes"; therefore, this finding is of very low safety significance (Green). Corrective actions to date included revisions to procedure FPP-08-09, to track barrier breaches that result from degraded conditions and provide conservative acceptance criteria.

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

Significance:  Apr 17, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Loss of Coolant Environment Improperly Considered in Containment Fan Coil Unit Calculation

The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, the licensee failed to use the correct data when determining the most limiting conditions on the safety related motors of the containment fan coil units (CFCU). The engineers failed to use the combination of the greatest density of the air-steam mixture following a loss of coolant accident (LOCA) with the greatest flow rate attributed to the fans by testing. As a result, the licensee was not aware that post LOCA, the motors will be operating at 113 percent of their design rating, and drawing 13 additional kW from each diesel generator. Upon discovery, the licensee recalculated the motors' horsepower, recalculated the service factor (percent above continuous design rating) at which the motors will be operating, and recalculated the elevated current that will be drawn by the motors, and the elevated current at degraded voltage. In addition, the licensee had to reevaluate whether the over-current trip setpoint of the motors will be exceeded.

This issue was more than minor because the assumed power drawn by the motors was significantly less, the existing margin was already low, and as a consequence, the error resulted in a significant reduction in margin. This issue also impacted the capability of the emergency diesel generators to supply the required power to the CFCU's motors. The issue was of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations."
Inspection Report# : [2007006](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : February 04, 2008