Braidwood 2
4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE EVALUATION OF OPERATING EXPERIENCE CONTRIBUTES TO A UNIT 2 REACTOR TRIP
A finding of very low safety significance was identified by the inspectors when licensee personnel failed to adequately utilize operating experience that ultimately contributed to an August 16, 2010, Unit 2 reactor trip. Specifically, the licensee did not properly evaluate received operating experience as documented in Issue Report (IR) 259836, "OPEX Review: Isophase Bus Ground Faults." A portion of this document emphasized the need to consider re-evaluating the associated preventative maintenance frequency for deionizer grids, louvers, and dampers if the isophase air flow through these devices had been raised since the last inspection. The station had occasionally raised air flow since 2002 and no actions were taken to address this portion of the IR. On August 16, 2010, pieces of an isophase crossover damper broke off and caused a phase to ground short, resulting in a turbine trip and automatic reactor trip. The licensee's root cause evaluation determined that not properly evaluating this portion of the IR was a missed opportunity and likely contributed to the cause of the trip. The licensee entered this issue into their corrective action program (CAP) as IR 1101855. Corrective actions for this issue included reevaluating the operating experience and revising the preventative maintenance schedule to ensure crossover dampers are inspected and/or replaced prior to failure, with the scheduled periodicity to be based upon a thorough engineering analysis. The maintenance procedure for the isophase bus duct was also revised to include inspection criteria for the crossover dampers. The inspectors determined that the failure to adequately evaluate readily available industry operating experience in accordance with station procedure LS-AA-115, "Operating Experience Program," was a performance deficiency. Specifically, the station concluded the operating experience was not applicable to Braidwood station even though air flow through the dampers had been raised occasionally since 2002 and no actions to reevaluate the preventive maintenance frequency were taken. The finding was determined to be more than minor because it was associated with the Procedure Adequacy attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The performance deficiency contributed to the cause of the August 16, 2010, Unit 2 reactor trip. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the Initiating Events cornerstone. The finding screened as having very low safety significance (Green) because it was determined not to contribute to both a plant trip and the likelihood that mitigating system equipment or functions would not be available. The inspectors did not identify a cross-cutting aspect associated with this finding since it was not considered to reflect current performance.

Inspection Report# : 2010005 *(pdf)*

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
FAILURE TO IDENTIFY AND CORRECT WATER DISCHARGED TO THE TURBINE BUILDING FLOOR DURING CONDENSATE REJECT
A self-revealed finding of very low safety significance (Green) was identified for the failure to correct a condition that resulted in water being discharged to the turbine building floor during the reject of condensate from the condenser hotwell. Specifically, water had been observed to overflow to the turbine building floor in multiple instances in the past during hotwell condensate reject. However, the licensee did not implement corrective actions to correct this condition or evaluate its impact on plant equipment as required by the licensee's corrective action program. The water discharged from the condensate hotwell reject during the Unit 2 trip caused a reactor trip of Unit 1 on August 16,

2010. The licensee entered this issue into its corrective action program and changed the operation of the condensate reject from an automated action to a manual action controlled by the operators.

The finding was determined to be more than minor because it was associated with the Initiating Events Cornerstone attribute of configuration control, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability. The finding screened as very low safety significance (Green) because a Phase 3 evaluation determined that it resulted in a delta core damage frequency of 5.6E-7/year with Large Early Release Frequency (LERF) not being a risk contributor. No violation of NRC requirements was identified because the deficiencies that contributed to the reactor trip were associated with nonsafety-related components. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution, corrective action program component, because the licensee did not have a low threshold for identifying issues and did not identify issues completely. [P.1(a)] (Section 4OA5.3)
Inspection Report# : 2010010 *(pdf)*

Significance: G Jun 30, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
UNIT 2 LOSS OF OFFSITE POWER COINCIDENT WITH A REACTOR TRIP DUE TO LOSS OF 2C REACTOR COOLANT PUMP
A finding of very low safety significance was self-revealed on July 30, 2009, after the Unit 2 reactor tripped due to a trip of the 2C reactor coolant pump on overcurrent. The 2C reactor coolant pump tripped on overcurrent following an automatic bus transfer due to the loss of station auxiliary transformer 242-1 on a sudden pressure relay actuation. Subsequent investigation identified the cause of the 2C reactor coolant pump trip to be incorrect setpoints on the reactor coolant pump overcurrent relays. The inspector determined that this cause was not a violation of NRC requirements since the overcurrent trip function of the reactor coolant pump is not a safety-related function. The licensee entered this condition into their corrective action program. Corrective actions included: increasing the Unit 2 reactor coolant pump overcurrent relay dropout values from 75 to 90 percent, adjustment of the 2C reactor coolant pump overcurrent time delay setting, extent of condition review for Unit 1 during their next scheduled refuelling outage (Fall 2010), and a revision of station procedures to include periodic calibration of the reactor coolant pump overcurrent relays. This performance deficiency was considered more than minor because it impacted the Configuration Control attribute of the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors performed a Phase 1 Significance Determination Process review for this finding using the guidance provided in IMC 0609, Attachment 4, “Initial Screening and Characterization of Findings.” Based on Tables 2, “Cornerstones and Functions Degraded as a Result of the Deficiency,” and 3b, “Significance Determination Process Phase 1 Screening Worksheet for Initiating Events, Mitigation Systems, and Barriers Cornerstones,” in IMC 0609, Attachment 4, the inspectors determined the finding was a transient initiator contributor in the Initiating Events Cornerstone. The inspectors answered ‘No’ to the Transient Initiators question in the Initiating Events Cornerstone Column of IMC 0609, Attachment 4, Table 4a, “Characterization Worksheet for Initiating Event, Mitigating System, and Barrier Integrity Cornerstones,” and determined that the issue was of very low safety significance. No cross-cutting aspects were assigned to this issue since the performance deficiency was not reflective of current performance.

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
DEGRADED FIRE SEAL BETWEEN TWO FIRE ZONES
A finding of very low safety significance and an associated NCV of License Condition 2.E was identified by the inspectors when licensee personnel failed to maintain a fire seal between Unit 2 Fire Zone 11.6 2 on the 426 elevation

and Unit 2 Fire Zone 11.5A 2 on the 414 elevation of the auxiliary building and adjacent to the containment structure in accordance with the approved Fire Protection Program. This issue was entered into the licensee's corrective action program as IR 1126534. Corrective actions consisted of implementing a fire watch for this area until the seal was repaired. In addition, the licensee performed an extent of condition review and entered additional related deficiencies into the correction action program. The inspectors determined that the failure to identify and implement corrective actions for a degraded fire seal between two fire areas was contrary to the approved Fire Protection Plan and was a performance deficiency. The degraded fire seal was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors (Fire) and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, fire seals are designed to confine a fire within an area for a time to allow for mitigating actions. A degraded fire seal would not assure this confinement function would be met for the designed and expected duration. The inspectors determined that the finding was of very low safety significance (Green) in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process." The inspectors identified that this issue had a cross-cutting aspect in the Problem Identification and Resolution area because licensee personnel failed to identify and therefore assess this issue completely, accurately, and in a timely manner within the station's CAP (P.1(a)).

Inspection Report# : 2010005 *(pdf)*

Significance: SL-IV Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Submit a Licensee Event Report per 10 CFR 73(a)(2)(v) (Section 4OA3.5)
A Severity Level IV NCV of 10 CFR 50.73(a)(2)(v) was identified by the inspectors when licensee personnel failed to report known conditions that could have prevented the fulfillment of the Residual Heat Removal (RHR) system to perform its designed emergency core cooling safety function while operating in the shutdown cooling mode of operation, within 60 days of discovery. Specifically, upon receipt of Westinghouse Nuclear Safety Advisory Letter (NSAL) 0904, "Presence of Vapor in Emergency Core Cooling System/Residual Heat Removal System in Modes 3 or 4 Loss of Coolant Accident Conditions," the licensee determined that a loss of RHR system safety function occurred when both trains of the RHR system were placed into the shutdown cooling mode of operation above 200 degrees Fahrenheit (°F). The station identified four instances in which both trains of RHR were operated in the shutdown cooling mode of operation above 200°F over the previous 3 year period. The licensee, however, failed to report to the NRC within 60 days that the RHR safety function had been lost. The station entered this issue into the CAP as IR 1155372. Corrective actions included the issuance of Licensee Event Report (LER) 05000456/457/2010-007-00 on January 18, 2010.

The inspectors determined that the failure to report this LER in accordance with NRC regulations was a performance deficiency since this issue had the potential to impact the regulatory process. Therefore, this violation was dispositioned through the traditional enforcement process. The inspectors determined that this issue was a Severity Level IV violation based on a similar example referenced in NRC Enforcement Policy Supplement I, Example D.4. The inspectors evaluated this issue under the Reactor Oversight Process (ROP) and did not identify a performance deficiency that could be assessed under the SDP. (Section 4OA2.2).
Inspection Report# : 2010005 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURES FOR TEMPORARY SCAFFOLDS
The inspectors identified a Green finding and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," related to the control of temporary scaffolds. Specifically, the licensee's procedure for the installation, modification, and removal of scaffolds was not followed on a routine basis for temporary scaffolds that remained in the plant for greater than 90 days. The licensee entered this issue into the Corrective Action Program as Issue Report 1095900. Corrective actions for this issue included walk downs of temporary scaffolds that had been in place for greater than 90 days utilizing the permanent scaffold checklist, and an assignment to ensure the procedure was followed in the future.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix E, “Examples of Minor Issues.” Specifically, this issue was similar to the more than minor criteria in Example 4.a, “Insignificant Procedural Errors,” in that the licensee failed to perform engineering evaluations on similar issues, or if the later evaluation determined that safety-related equipment was adversely affected. The finding was of very low safety significance because there was not a confirmed loss of operability of any mitigating system component. This finding was associated with the cross-cutting aspect of Decision-Making in the Human Performance cross-cutting area. Specifically, the licensee had not made safety-significant or risk significant decisions by utilizing the systematic scaffolding construction process to ensure adequate quality and therefore adequate safety was maintained (H.1(a)).
Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
UNPLANNED COOLING WATER FLOW REDUCTION DURING SX IST SURVEILLANCE TEST
A self-revealed Green finding and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified after the licensee failed to follow procedures during an essential service water inservice test on August 24, 2010. Specifically, during the section of the procedure utilized to establish testing conditions, the licensee throttled the wrong valve resulting in an unplanned reduction in flow to safety-related structures, systems, and components. This flow reduction resulted in the Train “B” equipment being declared inoperable for approximately 5 minutes. The licensee entered this issue into the CAP as IR 1105448. Corrective actions for this issue included returning the Unit 2 essential service water system to operable status by restoring the required valve lineup and a corrective action assignment to provide additional training to the operating crews on the use of human error prevention techniques.

The inspectors determined that this finding was more than minor, because it was associated with the Human Performance attribute of the Mitigating Systems Cornerstone and impacted the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance based on a Phase 3 Significance Determination Process analysis that conservatively bounded the risk of this event to be less than 1.0E-7/yr. The inspectors concluded that this finding was associated with the cross-cutting aspect of Work Practices in the Human Performance cross-cutting area because adequate human error prevention techniques were not effectively used to ensure that the surveillance activity was performed properly (H.4(a)).
Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FOREBAY INSPECT-AND-CLEAN ACTIVITIES DID NOT ENSURE THAT SSCs WILL BE CAPABLE OF ERFORMING THEIR SAFETY FUNCTION
The inspectors identified a Green finding and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to establish adequate controls to ensure that forebay inspect-and-clean activities provided assurance that systems, structures, and components would be capable of performing their safety function during inspect-and-clean intervals. Specifically, the inspectors noted that during the event on August 16, 2010, the operability margin of one train of the essential service water system decreased to zero under forebay fouling conditions that were less than the pre-established limiting conditions. The licensee entered this issue into its corrective action program (CAP).

The finding was determined to be more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, forebay conditions would have been allowed to degrade between inspect-and-clean intervals and the potential adverse impact to the essential service water system and its supported equipment was not evaluated. The finding screened as very low safety significance because it was a design deficiency that was confirmed not to result in an actual loss of operability or functionality. The inspectors determined that this finding had a cross cutting aspect in the area of human performance, decision-making component, because the licensee did not make safety-significant or risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety was maintained. [H.1(a)] (Section 4OA5.1)

Inspection Report# : 2010010 *(pdf)*

Significance: G Sep 17, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Operability Determination Procedure
The inspectors identified a Green finding and an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to adhere to Operability Determination Procedure OP AA 108-115 after identifying a potential auxiliary feedwater (AFW) system design vulnerability. Specifically, since May 15, 2007, the licensee had questioned the motor-driven AFW system's capability to effectively transfer its water source from the Condensate Storage Tank (CST) to the essential service water system during a hypothetical catastrophic failure of the non-seismic CST. The lack of involvement in bringing this issue to the attention of the operating crew, lack of quality in evaluating the issue, and length of time the questions had been unanswered were not consistent with the Operability Determination process. The licensee entered this issue into their CAP as Issue Report (IR) 1114604. Corrective actions planned included performing an Operability Evaluation and a corrective action assignment to ensure a rigorous evaluation was performed on the motor-driven AFW pump's motor and breaker.

The inspectors determined that this issue was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because the issue 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 AFW pump operability was not fully evaluated by the licensee. The finding was of very low safety significance because the issue was not a confirmed loss of operability and did not represent a risk significant issue based on the plant's design backup capability to remove decay heat via the primary feed and bleed method. This finding had a cross-cutting aspect in the area of Human Performance for Decision-Making (H.1(a)). Specifically, the licensee did not make a safety-significant or risk-significant decision using the Operability Evaluation systematic process, especially when faced with uncertain or unexpected plant conditions involving a potential design vulnerability to the plant to ensure safety was maintained. (Section 4OA2.1.b.2.c)
Inspection Report# : 2010006 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
DDAFW Pump Battery Racks were not restored to their Design Basis Seismic Category I
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 restore the Diesel Driven Auxiliary Feedwater (DDAFW) battery racks to their design basis qualification, Seismic Category I. Specifically, although the licensee identified the existence of gaps between the wooden spacer blocks, batteries and end of racks in 2004 the licensee failed to provide adequate justification to demonstrate that the existing condition still met the Seismic Category I Design Basis requirements as specified in their design documents. The gaps between the wooden spacer blocks could affect the reliability of the DDAFW DC safety-related batteries being that this component was outside its design basis for over a period of six years. The licensee subsequently entered the issue into their corrective action program and restored the batteries racks to their design requirements.

The finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance, and affected the cornerstone objective of ensuring the availability of DDAFW batteries to perform their safety function in external events to prevent undesirable consequences. Specifically, the licensee did not assure that the wooden spacer blocks including the gap would provide adequate support to ensure that the seismically qualified battery rack will perform its safety function. This finding is of very low safety significance (Green) because the qualification deficiency was confirmed not to result in loss of operability or functionality. The inspectors determined that there was no cross-cutting aspect associated with this finding because the gaps between the wooden spacers and the DDAFW batteries were initially identified in 2004; therefore, the finding was not indicative of the plant's current performance.
Inspection Report# : 2010007 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Lack of Calculation for the DDAFW Minimum Fuel oil Tank Setpoint Level
The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance related to the licensee's failure to develop a calculation for the DDAFW pump minimum fuel oil tank level setpoint. Specifically, the licensee failed to perform a calculation specific to the DDAFW pump day tank to verify the 74 percent level indication was equivalent to the 420 gallons of usable fuel volume that was required by the Technical Specifications (TS). The licensee subsequently entered the issue into their corrective action program to develop design basis documentations.

This finding is more than minor because it was associated with the Mitigating Systems cornerstones attribute of design control and affected the cornerstone objective of ensuring the capability of the safety-related system to respond to initiating events to prevent undesirable consequences. Specifically, the licensee failure to verify that 74 percent tank level exceeded the TS value did not assure the pump was capable of performing its safety function for the entire seven hours mission time. This finding is of very low safety significance (Green) because subsequent calculation/evaluation determined the volume of the tank at 74 percent level was slightly above the minimum required TS limit. The inspectors determined there was no cross-cutting aspect associated with this finding because the deficiency was a legacy design issue and, therefore, was not indicative of the plant's current performance.

Inspection Report# : 2010007 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Potential Clogging of Essential Service Water (SX) Throttle Valves for Pump Room Coolers
The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Specifically, the licensee's procedures for flow balancing Essential Service Water (SX) supply to safety-related pump room coolers did not include any precautionary statements to limit the degree to which branch loop throttle valves could be throttled down without introducing concerns about potential clogging from particulate in the service water and resultant flow reduction. The licensee subsequently entered the issue into their corrective action program and performed immediate corrective actions included, engineering evaluation to determine current operability, repositioned all throttle valves to at least ¾ turns open and revised the valve throttling procedure to prevent any valve from being throttled to less than ¾ turns open in the future.

The finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of procedure quality and affected the cornerstone objective of ensuring the capability of the system to respond to initiating events to prevent undesirable consequences. Specifically, under accident conditions, the position of these throttle valves could have led to a potential degradation of the ability of the room coolers to perform their safety-related function of protecting the emergency core cooling system (ECCS) pumps from elevated environmental temperatures. The finding is of very low safety significance (Green) because the design deficiency did not contribute to the likelihood that mitigating equipment or functions would not be available. The inspectors determined there was no cross-cutting aspect associated with this finding because the deficiency was a legacy procedural issue and, therefore, was not indicative of the plant's current performance.

Inspection Report# : 2010007 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Adverse Impact of Flood Drain Strainer Design Modification on Flooding Analysis
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 fully verify the adequacy of a design modification important to safety. Specifically, the licensee failed to recognize that bag-type strainers back fitted into floor drains in the Auxiliary Building for the purpose of preventing debris from blocking the floor drain piping were designed in such a way that they actually increased the potential for blockage, thus negatively impacting the analysis of record for internal flooding. The licensee subsequently entered the issue into their corrective action program, performed preliminary evaluation of the affected areas and demonstrated operability. Additional action was initiated to revise the internal flooding calculation and safe shutdown analysis to address the impact of the floor drain strainers.

The finding was more than minor because it was associated with the Mitigation Systems Cornerstone attribute of protection against external events such as flooding and affected the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the floor drain strainer bags were inadequately designed such that they would have increased the possibility of drain plugging. The finding is of very low safety significance (Green) because the licensee was able to demonstrate that, in the event the drains became plugged in any room, a flood in the affected room would have not affected the alternate shutdown equipment. The inspectors determined there was no cross-cutting aspect associated with this finding because these bag-type strainers were installed in 1996; therefore, the finding was not reflective of current performance.

Inspection Report# : 2010007 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Conservative Acceptance Criteria for CS Pump Performance Testing
The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," having very low safety significance for the licensee's failure to ensure adequate acceptance limits were incorporated into test procedures. Specifically, the licensee failed to consider instrument loop uncertainties when determining the alert and required action values used in the IST procedure for testing of the containment spray (CS) pumps. Consequently, the acceptance criteria for both the upper and lower limits on total developed head (TDH) were non-conservative. As a result, the licensee subsequently entered the issue into their corrective action program, performed an operability evaluation and concluded equipment were operable. Additional corrective actions were assigned to investigate and correct the cause of the apparent degradation of the 2B CS pump.

The finding was more than minor because it was associated with the Mitigating Systems cornerstones attribute of equipment performance and affected the cornerstone objective of ensuring the capability of the system to respond to initiating events to prevent undesirable consequences. Specifically, the failure to consider instrument uncertainties in the development of IST acceptance criteria resulted in the creation of acceptance criteria values that did not ensure that the CS pump could meet its intended safety function. This finding is of very low safety significance (Green) because the licensee was able to demonstrate pumps operability; therefore, there was no loss of safety function. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the licensee failed to implement relevant information relating to failure to appropriately account for instrument uncertainties identified in Information Notice 2008-02 through changes to station procedures.

Inspection Report# : 2010007 *(pdf)*

Significance: G Apr 02, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
EDGs Fuel Oil Consumption Calculation Failed to Account for Frequency Variations
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 translate the allowable frequency variations, for the emergency diesel generators (EDGs), into the fuel consumption calculation. Specifically, the fuel oil consumption calculation for the EDGs did not assure that TS minimum required fuel limit of 44,000 gallons was adequate to support the EDGs operating at frequency higher than 60 Hertz (Hz) for the seven days mission time. As a result of the inspectors' questions, the licensee subsequently added an action item to an existing condition report to address frequency variation on fuel consumption.

The finding was more than minor because it was associated with the Mitigating Systems cornerstones attribute of design control and affected the cornerstone objective of ensuring the capability of the system to respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure that the minimum fuel required by TS of 44,000 gallons was adequate to support the EDGs mission time when operating at higher frequency than 60 Hz. This finding is of very low safety significance (Green) because the licensee was able to demonstrate that adequate fuel oil in the storage tanks would be available to support the EDGs when operating within the frequency variation band established by the administrative limits. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate problems associated with safety nuclear safety.

Inspection Report# : 2010007 *(pdf)*

Significance: G Mar 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY A CONDITION ADVERSE TO QUALITY
The NRC 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 licensee's failure to correct a Condition Adverse to Quality associated with the Unit 2A component cooling water heat exchanger. The licensee's corrective actions included initiating a new work request to repair the degradation during the next refueling outage, and determining how the work requests could be closed despite being properly tied to the corrective action program. This performance deficiency was considered more than minor because it was similar to example 3(g) in Appendix E of Inspection Manual Chapter 0612, in that a Condition Adverse to Quality was not corrected and it recurred, such that the operability of a mitigating system component was potentially affected. Because there was no actual loss of operability or functionality of the 2A component cooling water heat exchanger, the issue screened out as having very low safety significance (Green). This finding is associated with the cross-cutting area component of corrective action program in the problem identification and resolution cross-cutting area. Specifically, the licensee did not thoroughly evaluate why work requests to correct degradation of the 2A component cooling water heat exchanger were repeatedly cancelled with no actions taken and for unknown reasons (P.1(c)).
Inspection Report# : 2010002 *(pdf)*

Significance: SL-IV Mar 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM A 10 CFR 50.59 EVALUATION OF A TEMPORARY MODIFICATION TO THE 2B RVLIS PROBE
The inspectors identified a finding of very low safety significance and an associated Severity Level IV Non-Cited Violation for the failure to perform an adequate 10 CFR 50.59 screening of a temporary modification. Specifically, the licensee failed to recognize the impact of a temporary modification on emergency operating procedures, which resulted in the failure to perform a full evaluation of the modification. The licensee's corrective actions included reinforcing the current configuration of the 2B reactor vessel level indication system with operators and revising emergency operating procedures. In addition, the licensee plans to complete a full 10 CFR 50.59 evaluation to determine whether the modification required NRC approval prior to implementation.
The inspectors concluded that the violation was more than minor because the inspectors could not reasonably conclude that the modification would not require prior NRC approval based on the 10 CFR 50.59 screening. The inspectors answered 'no' to the Mitigating Systems cornerstone questions in Table 4 and, as a result, the issue screened as one of very low safety significance (Green). This finding is associated with the cross cutting area component of decision-making in the human performance cross cutting area. Specifically, when evaluating the operations impact of a new temporary modification on the 2B RVLIS probe, the licensee assumed the impact was unchanged from a prior temporary modification on the same equipment, which resulted in necessary procedure changes that were not identified (H.1(b)).
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 31, 2010

Identified By: NRC
Item Type: NCV NonCited Violation
DIESEL OIL STORAGE TANK ROOM SPRINKLER OBSTRUCTIONS
A finding of very low safety-significance and an associated Non-Cited Violation of Unit 2 License Condition 2.E was identified by the inspectors for the licensee's failure to provide foam sprinklers in the 2B diesel oil storage tank room that were free of obstructions. Specifically, the licensee failed to install all of the foam sprinklers in accordance with National Fire Protection Agency's NFPA-16-1980, "Standard for the Installation of Deluge Foam-Water Sprinkler Systems and Foam-Water Spray Systems," and NFPA-13-1985, "Standard for the Installation of Sprinkler Systems." The licensee entered the issue into their corrective action program for resolution and planned to evaluate the system and determine what modifications were required.
The finding was determined to be more than minor because the deficiencies affected the Mitigating Systems Cornerstone objective of ensuring the capability of systems to respond to initiating events such as fire. Specifically, the discharge of the foam spray may not reach a fire and could prevent the extinguishing agent from suppressing and extinguishing a diesel fuel oil spill fire because of the proximity of obstructions to the sprinklers. Because a fire involving a diesel oil storage tank room would only affect the associated emergency diesel generator and no other equipment would be affected, the issue was of very low safety-significance. No cross-cutting aspects were associated with this finding because it was not representative of current performance.
Inspection Report# : 2010002 *(pdf)*

Barrier Integrity

Significance: G Sep 17, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Untimely Corrective Action for Lack of Water Hammer Analysis on the Recycle Hodup tank.
The inspectors identified a Green finding and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," when licensee personnel failed to promptly correct a previously identified NCV regarding the lack of analysis for water hammer loads on the Recycle Holdup Tank (RHUT) inlet piping induced by Residual Heat Removal (RHR) system relief valve discharges. Specifically, the licensee failed to complete the necessary piping analysis to address potential water hammer effects since the issue was initially identified in June 2007 and documented as a NCV in February 2009. The licensee entered this issue into the CAP as IR 1117296 and planned to accelerate the completion schedule for the analysis.

The finding was more than minor because it was associated with the design control attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective of maintaining the radiological barrier function of the containment. The finding was of very low safety significance because it did not represent an actual open pathway from containment. This finding has a cross-cutting aspect in the area of Human Performance for Resources (H.2(a)) because the licensee failed to maintain long-term plant safety by completing the necessary piping load calculations in a timely manner. (Section 4OA2.1.b.3.b)
Inspection Report# : 2010006 *(pdf)*

Significance: G Mar 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
PERFORMANCE OF TROUBLESHOOTING LEADS TO AUXILIARY BUILDING VENTILATION FAN FIRE
A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Procedures," was self-revealed when, on January 9, 2010, auxiliary building ventilation fan 0VA01CC caught fire, resulting in the declaration of an Unusual Event. Specifically, troubleshooting performed on the inboard fan bearing in Spring 2009 changed the bearing oil level without proper limits established, which led to bearing failure due to lack of lubrication. The licensee's corrective actions included an evaluation of the oil consumption trends for other auxiliary building ventilation fans, additional training on work package quality, and a revision to other existing work orders that are intended to adjust auxiliary building ventilation fan oil levels.

The finding was more than minor because it impacted the Systems, Structures, and Components and Barrier Performance attribute of the Barrier Integrity 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. Because the finding only represented degradation, rather than loss, of the radiological barrier function provided for the auxiliary building it screened as an issue of very low safety significance (Green). This finding is associated with the cross-cutting area component of resources in the human performance cross-cutting area. Specifically, the work instructions for troubleshooting did not contain adequate guidance to adjust the oil bubbler without causing an adverse equipment impact (H.2(c)).
Inspection Report# : 2010002 *(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 : March 03, 2011