Braidwood 2
4Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: FIN Finding
FAILURE TO IMPLEMENT ABNORMAL OPERATING PROCEDURES WHEN ENTRY CONDITIONS WERE PRESENT
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to implement adverse weather Abnormal Operating Procedures (AOPs) when entry conditions were present. Specifically, the site was not aware of a severe thunderstorm warning that had been issued for the area on May 6, 2012, and did not implement site procedures that directed actions to be taken upon adverse weather conditions. In addition to entering the issue in the Corrective Action Program (CAP) as Issue Report (IR) 1364132, corrective actions included ensuring access to the National Weather Service website for Operations personnel, and implementation of additional weather alert notification tools. The performance deficiency was determined to be more than minor because it could be reasonably viewed as a precursor to a significant event in that the failure to implement the adverse weather AOPs could result in the failure to take actions intended to minimize the potential for a Loss of Offsite Power (LOOP) when the likelihood is elevated by adverse weather conditions. The performance deficiency was also determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely 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. In accordance with IMC 0609, Attachment 4, Table 2, the finding was determined to affect the Transient Initiator Contributor (e.g. loss of offsite power) function of the Initiating Events Cornerstone. The inspectors answered 'No' to the Transient Initiator questions in IMC 0609, Attachment 4, Table 4a. As a result, the issue screened as having very low safety significance (Green). This finding had a cross cutting aspect in the Resources component of the Human Performance cross cutting area because the licensee's facilities were not adequate to ensure main control room personnel were aware of the severe thunderstorm warning (H.2(d)).

Inspection Report# : 2012003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN WATERTIGHT DOOR SAFETY FUNCTION AFTER ROUTINE PASSAGE
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when the licensee's Plant Barrier Impairment (PBI) control program permitted the Unit 1 and Unit 2 Emergency Diesel Generator (EDG) Diesel Oil Storage Tank (DOST) room watertight doors to be left open and unattended following normal ingress into the Unit 1 and Unit 2 DOST rooms. The licensee entered this issue into their corrective action program (CAP) as IR 1449644. Corrective actions included the creation and implementation of Operations Department Standing Order (SO) 12 004 on December 18, 2012, until BwAP 1110-3 was formally revised on December 21, 2012 to suspend the practice of permitting the Unit 1 and Unit 2 DOST watertight doors to be left open and unattended to perform tours, inspections, walkdowns, sampling, or other routine tasks in the DOST rooms.
The finding was determined to be more than minor because it was associated with the Protection Against External

Factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, from August 1986 until December 7, 2012, the licensee permitted the practice of removing safety related flood barriers from service for individually short periods of time, multiple times of day, without ensuring that the described barrier would be both available and capable of performing its safety function during an internal turbine building flooding event. The finding was determined to be of very low safety significance following a detailed risk evaluation by an NRC senior reactor analyst (SRA). This finding had a cross cutting aspect in the Resources component of the Human Performance cross-cutting area since the licensee failed to ensure that an adequate procedure was maintained following a recent October 2011 revision to BwAP1110 3 that added specific requirements and expectations for normal passage through barrier doors. Specifically, the licensee specified new requirements for using safety-related doors in Section D.2.e of BwAP 1110 3, but failed to adequately apply these requirements to Section D.2.b of the same procedure (H.2(c)).
Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE PBI ALLOWANCE FOR ONE EDG DOST WATERTIGHT DOOR INOPERABLE
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to recognize that when one of the two Unit 1 or Unit 2 DOST room watertight doors was impaired, the safety function of both associated safety-related EDGs was adversely impacted since the access door between the two DOST rooms was not designed to be watertight. The licensee entered this issue into their CAP as IR 1451835. Corrective actions included the creation and implementation SO 12 004 on December 18, 2012, until BwAP 1110-3 was formally revised on December 21, 2012. Both the interim SO and revision to BwAP 1110-3 required that both EDGs be considered inoperable if a flood watch was not implemented prior to the impairment of a DOST room watertight door.
The finding was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, on at least one occurrence in the past three years, the licensee had unknowingly lost the EDG safety function when performing maintenance on DOST watertight doors. The finding was determined to be of very low safety significance following a detailed risk evaluation by an NRC SRA. There was no cross cutting aspect associated with the finding because it was not indicative of current performance. Specifically, an Engineering Change Request (ECR) that identified and evaluated this issue was completed in 1999.

Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: FIN Finding
INADEQUATE FUNCTIONALITY EVALUATION OF BLOCK WALLS FOR HIGH ENERGY LINE BREAK LOADS
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to perform an adequate technical review to determine the operability of auxiliary building safety-related block walls affected by High Energy Line Break (HELB) pressure loading. The licensee entered this issue in their CAP as IR 1454143. Corrective actions included a significant revision to the Operability Evaluation to address each of the inspector's concerns.
The finding was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the reliability, availability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Additionally, More than Minor Example 3.j of IMC 0612, Appendix E, "Examples of Minor Issues," was used to inform the answer to this more than minor screening question. Specifically, the licensee used non conservative allowable stress values for masonry and steel support columns that, at the time of discovery, resulted in reasonable doubt of the operability of the affected walls. In accordance with IMC 0609, "Significance Determination

Process," Attachment 4, "Initial Characterization of Findings," Table 2, the inspectors determined the finding affected the Mitigating Systems Cornerstone. As a result, the inspectors determined the finding could be evaluated using Appendix A, "The SDP for Findings At Power," Exhibit 2, for the Mitigating Systems Cornerstone. Because the finding did not ultimately affect the operability or functionality of any equipment, the inspectors answered 'Yes' to Screening Question 1 and determined the finding was of very low safety significance (Green). This finding had a cross cutting aspect in the Decision-Making component of the Human Performance cross cutting area because the licensee used non conservative assumptions in an operability evaluation of auxiliary building block walls. Specifically, the licensee used non conservative assumptions for masonry and steel allowable stresses in the evaluation of safety related walls, which could not be justified (H.1(b)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Dec 31, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
INADEQUATE WORK INSTRUCTIONS FOR ENSURING 2A EDG JACKET WATER HEAT EXCHANGER GASKET COMPRESSION
A finding of very low safety significance (Green) and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self revealed when on October 23, 2012, the 2A EDG lower jacket water cooler developed a leak due to inadequate work instructions that resulted in insufficient stationary head to cooler shell gasket compression. The licensee entered this issue into their CAP as IR1430575. Corrective actions included a replacement of the 2A jacket water cooler gasket utilizing proper torque values. In addition, the licensee's planned and implemented corrective actions included development of new work instructions that included joint torque values, lubrication of fasteners, and use of hardened washers when reinstalling safety-related EDG lube oil and jacket water heads.
The finding was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). In particular, although Unit 2 was defueled at the time of the event, Unit 1 was in Mode 1 and the ability to cross tie the 2A EDG to Unit 1 safety-related 4 kilovolt (kV) Bus 141, which was credited in the licensee's Updated Final Safety Analysis Report (UFSAR), was unavailable for greater than 5 days. In accordance with IMC 0609, "Significance Determination Process," Attachment 4, "Initial Characterization of Findings," Table 2, the inspectors determined the finding affected the Mitigating Systems cornerstone. As a result, the inspectors determined the finding could be evaluated using Appendix A, "The SDP for Findings At Power," Exhibit 2, for the Mitigating Systems cornerstone. The inspectors answered 'No' to the Mitigating Systems cornerstone questions in IMC 0609, Appendix A, Exhibit 2.A, and, as a result, the finding screened as having very low safety significance (Green). This finding had a cross cutting aspect in the Operating Experience component of the Problem Identification and Resolution cross cutting area since licensee personnel failed to adequately evaluate and translate into work instructions available applicable operating experience regarding installation of EDG jacket water or lube oil cooler stationary heads (P.2(b)).

Inspection Report# : 2012005 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY EVALUATE OPERATION CREW PERFORMANCE FOR A REACTOR TRIP AND FAILURE TO ADEQUATELY EVALUATE EMERGENCY OPERATING PROCEDURE STANDARDS
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to implement a Caution Note in Emergency Operating Procedure (EOP) 2BwEP ES-0.1, "Reactor Trip Response," during a July 30, 2009, Unit 2 reactor trip; failed to identify that deficiency during a "4.0 Crew Critique" to evaluate Operation's response to that event; and failed to adequately evaluate a concern identified during this inspection period that was entered into the Corrective Action Program (CAP) related to the requirement to follow the EOP guidance. In

particular, licensee personnel incorrectly concluded that a reactor trip involving reactor coolant system (RCS) natural circulation would not require the initiation of an RCS cooldown within 2 hours following the shutdown despite the licensee's Analysis of Record (AOR) and Technical Specification (TS) bases documents that required a cooldown be initiated within 2 hours to ensure that an adequate volume of water was available in the Condensate Storage Tank (CST) to cool down the RCS without utilizing the Ultimate Heat Sink (UHS). Corrective actions included revising 1/2BwEP ES-0.1 to relocate the Caution Note in the procedure and alleviate any future confusion with the cooldown requirement. Additionally, the Caution Note was modified to be consistent with the Current Licensing Basis (CLB) analysis of the CST and Operations management discussed the issue with the Operations crew staff and supervision to ensure that the Caution Note would be performed as required by 1/2BwEP ES-0.1.
The inspectors determined that the failure to follow the EOP Caution Note during the July 30, 2009 Unit 2 reactor trip; the failure to identify this deficiency during the 4.0 Crew Critique assessment associated with this reactor trip, and the failure to adequately evaluate an issue entered into the CAP regarding this requirement was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it was associated with the Human Performance and Design Control attributes of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The inspectors evaluated this finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," which directed the finding to be screened using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings at Power." The inspectors determined that because the station operated and nominally maintained CST level significantly above the minimum CST TS level prior to the June 30, 2009 Unit 2 reactor trip, the CST maintained its operability and functionality, and therefore this finding was of very low safety significance (Green). This finding had a cross cutting aspect in the CAP component of the Problem Identification and Resolution cross cutting area because the licensee failed to adequately evaluate Operations' response to the July 30, 2009, reactor trip and subsequently failed to adequately evaluate an issue identified within the CAP (P.1(c)).
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY EVALUATE THE SPECIFIED TS CST FUNCTION AFTER THE IDENTIFICATION OF A NON-CONFORMING CONDITION ADVERSELY EFFECTING SG PORV FLOW RATES
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to adhere to Corrective Action and Operability Determination Program standards after identifying a non conforming condition associated with reduced steam generator (SG) power-operated relief valve (PORV) flow capacities. Specifically, in April 2012, the licensee identified that the station SG PORV relief capacities were lower than what was assumed in the CLB. This condition was identified during laboratory testing to support a power uprate application. Throughout the licensee's operability assessment spanning from April to September 2012, the inspectors identified that the licensee did not adequately and effectively utilize station standards to evaluate Unit 2 CST operability after initially identifying the issue in April 2012; when processing a formal Operability Evaluation; after receiving new information from a sensitivity study performed by a contractor; and after the inspectors directly identified an issue of concern to the licensee that was addressed through the CAP. Specifically, the licensee did not ensure that the Unit 2 CST was capable of performing its TS function after identifying a non conservative condition that ultimately resulted in requiring nearly double the CST volume from what was assumed in the CLB. The inspectors determined that such a significant decrease in available margin provided a cause for reasonable doubt of Unit 2 CST operability. Corrective actions include a revision to the Operability Evaluation that addressed the deficiency and re-confirmed CST operability.
The inspectors determined the failure to evaluate the effect the reduced Unit 2 SG PORV flow rate capacities would have on the Unit 2 CST's ability to perform its specified TS function was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The inspectors evaluated this finding using the SDP in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings," which directed the finding to be screened using IMC 0609, Appendix A, "The

Significance Determination Process (SDP) for Findings at Power."

The inspectors determined that because the CST maintained its operability and functionality within the CLB that this finding was of very low safety significance (Green). This finding had a cross cutting aspect in the Decision-Making component of the Human Performance cross cutting area because the licensee failed to use conservative decision-making and verify the validity of underlying assumptions when evaluating the effect of reduced Unit 2 SG PORV flow capacities on CST operability (H.1(b)).

Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO TRAIN FIRE BRIGADE MEMBERS ON THE USE OF ELEVATORS
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Braidwood Operating License Condition 2.E, "Fire Protection Program," when licensee personnel failed to ensure that fire brigade members retained knowledge provided in fire brigade initial training. Specifically, station Fire Chiefs and fire brigade members did not have an adequate knowledge or continuing training on the proper methods and implementation for the use and control of elevators during a fire as demonstrated during a fire drill on June 14, 2012. Corrective actions included ensuring all elevator keys were adequately stored, informing the Fire Chiefs and fire brigade members of the key locations, and initiating a training request to provide the Fire Chiefs and fire brigade members with adequate training covering elevator key usage and elevator control during a fire response.
The inspectors determined that the failure to ensure Fire Chiefs and fire brigade members had the knowledge to perform their duties was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it was associated with the External Factors (Fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the turbine building and auxiliary building elevators could be utilized in the licensee's Fire Protection Program to transport fire brigade members and their equipment in response to a fire. Safety-related equipment was in (or adjacent to) these fire zones. Therefore, if elevators were not controlled in the correct manner, the elevator may not be available for fire brigade use or may place personnel in danger by stopping at an undesirable elevation. The inspectors screened the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings." Based on Table 2, the inspectors concluded the issue represented a weakness in the External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Protection Degraded) function of the Mitigating Systems Cornerstone. The inspectors reviewed the questions in Table 3 of IMC 0609, Attachment 4, and answered 'No' to Questions A-D and 'Yes' to Question E.1, "Does the finding involve discrepancies with the fire brigade?" As a result, the inspectors transitioned to IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings at Power." The inspectors reviewed IMC 0612, Appendix A, Exhibit 2, and answered 'No' to Question B - External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Protection Degraded), "Does the finding involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event (e.g., seismic snubbers, flooding barriers, tornado doors)?" As a result, the finding screened as having very low safety significance (Green). This finding had a cross-cutting aspect in the Resources component of the Human Performance cross-cutting area because the licensee failed to ensure Fire Chiefs and fire brigade members had an adequate knowledge or continuing training on the proper methods and implementation for the use and control of elevators during a fire as demonstrated during a fire drill on June 14, 2012 (H.2(b)).
Inspection Report# : 2012004 *(pdf)*

Significance: G Aug 24, 2012
Identified By: NRC
Item Type: VIO Violation
Failure to Install Foam-Water Sprinklers In Accordance With Sprinkler Standard
The inspectors identified a finding of very low safety significance associated with cited violation of License Condition 2.E for the licensee's failure to implement the approved Fire Protection Program by failing to install foam-water sprinklers in accordance with the standard for installing sprinklers. Specifically, the licensee failed to correct

significant obstructions to foam-water sprinklers in the Unit 2 2B diesel oil storage tank room that were previously identified by the NRC in a Non-Cited Violation in May 2010. The licensee entered this issue into their corrective action program and planned to survey each of the four diesel oil storage tank rooms for obstructions to determine the scope of physical changes needed to bring each room into compliance with the standard for installing sprinklers. The licensee will address corrective actions as part of their response to the Notice of Violation.

The inspectors determined that the finding was more than minor because the significant obstructions to foam-water sprinklers in the 2B diesel oil storage tank room could adversely affect the application of foam or water suppressant in the event of a fire. The finding was of very low safety significance because a fire in the 2B diesel oil storage tank room would only affect the associated emergency diesel generator and no other equipment would be affected. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program because the issue had been previously identified by the NRC and the resolution did not address the cause of the issue, (i.e., the physical installation).

Inspection Report# : 2012008 *(pdf)*

Significance: G Aug 24, 2012
Identified By: NRC
Item Type: FIN Finding
Failure to Properly Address Fire Brigade Performance Deficiencies
The inspectors identified a finding of very low safety significance for the licensee's failure to properly address fire brigade drill performance deficiencies identified after completion of an unannounced fire drill. Specifically, the licensee failed to address the need to wait for the fire brigade leader's determination that it was safe to use elevators. The licensee entered this issue into their corrective action program and generated training requests to reinforce the proper use of elevators by the fire brigade.

The inspectors determined that the finding was more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, the improper use of elevators by the fire brigade during a fire could impact the ability of the brigade to fight a fire as smoke, heat, or flames could affect fire brigade members upon opening of elevator doors on the fire floor. The finding was of very low safety significance because the simulated fire was successfully suppressed by individuals who did not use the elevator. This finding had a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not enforce expectations on not proceeding in the face of uncertainty or unexpected conditions.

Inspection Report# : 2012008 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: FIN Finding
OPERABILITY DETERMINATION STANDARDS NOT FOLLOWED FOR HELB RELATED STRUCTURAL ISSUES IDENTIFIED BY THE NRC
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to follow the Operability Determination process after identifying potential safety related structural loading issues created by a postulated turbine building High Energy Line Break (HELB). Specifically, the licensee identified and addressed a very specific issue related to safety related divisional separation wall loading concerns, but failed to adequately evaluate the extent to which a postulated current licensing basis (CLB) HELB condition could affect other Technical Specification (TS) and/or safety related structures, systems, and components (SSCs) within the areas of concern. The licensee entered these issues into the CAP as IR 1382574 and IR 1389889. Corrective actions included performing a prompt operability determination associated with the issues raised by the inspectors. The licensee also planned to complete a formal revision to Operability Evaluation 2012-004 by July 24, 2012. The performance deficiency was determined to be more than minor because it was similar to the "not minor if" aspect of Example 3.j in IMC 0612, Appendix E, "Examples of Minor Issues," since the issues identified by the inspectors resulted in a condition in which there was a reasonable doubt on the operability of the structures protecting TS components and systems that perform a TS function. The issues were dissimilar from the "minor because" aspect of the example since the impact of the issues

were not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process", Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a, for the Mitigating Systems Cornerstone. The inspectors answered 'No' to all of the Mitigating Systems Cornerstone questions in Table 4a of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding had a cross cutting aspect in the Decision Making component of the Human Performance cross cutting area because licensee personnel failed to use the Operability Determination process to evaluate the issues identified by the inspectors and therefore did not obtain interdisciplinary input to make an operability decision (H.1(a)).

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN APPROVED FIRE PROTECTION PROGRAM REGARDING SAFE SHUTDOWN FIRE DAMPER QUALIFICATION
The inspectors identified a finding of very low safety significance and an associated NCV of License Condition 2.E when licensee personnel failed to adequately maintain the approved fire protection program after receiving information that adversely affected the qualification of fire dampers credited in the safe shutdown analysis. Specifically, the licensee inadvertently removed an action to secure ventilation upon the confirmation of a fire following a revision to the station's Pre-Fire Plans in 2010. This action was established after the licensee received NRC Information Notice (IN) 89 52, "Potential Fire Damper Operational Problems," which notified the licensee that these dampers were not qualified to shut with air flow through them. A significant contributor to this error was a failure of the licensee to adequately incorporate this action into the appropriate procedures and clearly document this requirement and basis for this requirement into the approved fire protection program. The licensee entered this issue into their corrective action program (CAP) as IR 1309949. Corrective actions included the implementation of Operations Standing Order 11 027 requiring manual operator action until a procedure change to the Fire Hazardous Materials Spill and/or Injury procedure (BwAP 1100 16), and Fire Response Guidelines (BwOP FP 100) was performed. Additionally, the licensee created an assignment to provide training to the fire brigade leaders for these planned procedure revisions. The finding was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to ensure that ventilation systems were secured upon the confirmation of a fire could affect the ability of fire dampers to shut and perform their safety function. The inspectors evaluated this finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I Initial Screening and Characterization of Findings," Table 3b for the Mitigating Systems Cornerstone, which directed this finding be reviewed using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," since the finding affected fire barriers. The inspectors assigned this issue a "low degradation" rating based upon the high likelihood that ventilation would be secured upon the onset of a fire due to numerous ionization detectors that automatically trip ventilation systems upon the detection of smoke. Based on this assigned rating, the inspectors determined that this finding was of very low safety significance (Green). The inspectors determined that the most significant causal factor related to this finding was a failure to adequately incorporate the requirement into the current licensing basis (CLB) in 1989, and therefore this finding was not indicative of current performance and a cross-cutting aspect was not assigned.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY CORRECT CONDITIONS ADVERSE TO QUALITY
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50,

Appendix B, Criterion XVI, “Corrective Action,” when licensee personnel failed to promptly correct conditions adverse to quality. Specifically, from 2006 to 2011, licensee personnel failed to correct a poor material condition in the auxiliary building ventilation (VA) intake plenums that resulted in clogging of floor drains and water leakage into electrical penetration and cable spreading room areas; and from 2010 to 2012, the licensee failed to correct a degraded floor drain in the Unit 2 miscellaneous electrical equipment room (MEER) that was next to a safety shower adjacent to a safety related direct current (DC) bus. The licensee entered this issue into their CAP as IRs 1291696 and 1332289. Corrective actions included cleaning and re coating the VA intake plenums and routing out the floor drains in the MEERs. The finding was determined to be more than minor because it was associated with the Design Control and Protection Against External Events attributes of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage.). Specifically, the licensee failed to promptly correct degraded and clogged auxiliary building floor drains or the poor material condition in the VA intake plenum. The inspectors evaluated this finding using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase I Initial Screening and Characterization of Findings,” and determined that the finding affected the Flood Protection Degraded Function of the Mitigating Systems Cornerstone, per Table 2. The inspectors answered ‘Yes’ to Question 5 in Table 4a, which directed the inspectors to Table 4b since the issue was related to flood protection. The inspectors answered ‘No’ to Question 2 of Table 4b because the floor drains were degraded, but the pooling water in the VA plenums or MEERs would not have likely resulted in a plant trip or transient. As a result, the issue screened as having very low safety significance (Green). This finding had a cross cutting aspect in the Corrective Action Program component of the Problem Identification and Resolution cross cutting area because the licensee failed to properly classify, prioritize, or evaluate conditions adverse to quality associated with auxiliary building floor drains and VA intake plenum such that the conditions were promptly corrected [P.1(c)].

Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO SCOPE SAFETY-RELATED HELB BARRIERS INTO THE MAINTENANCE RULE
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50.65(a)(1), 10 CFR 50.65(a)(2), and 10 CFR 50.65(b) when licensee personnel failed to scope numerous high energy line break (HELB) hazard barrier dampers into the maintenance rule, as required. The function of these barriers was to protect safety-related equipment such as the emergency diesel generators (EDGs) and safety-related alternating current (AC) and DC buses and cables from credited HELB sources in the turbine building. The licensee entered this issue into their CAP as IR 1310448. Corrective actions included scoping the dampers into the maintenance rule and assigning preventative maintenance performance monitoring criteria.
The finding was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to monitor damper performance and establish performance goals could adversely affect the availability, reliability, and capability of safety-related structures, systems and components protected by the hazard barrier. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 4, “Phase I Initial Screening and Characterization of Findings,” Table 4a for the Mitigating Systems Cornerstone. The finding screened as having very low safety significance since it was not a design or qualification deficiency confirmed not to result in a loss of operability or functionality. This finding was not indicative of current performance since the scoping aspects were determined prior to the rule’s effective date of July 10, 1996. As a result, a cross-cutting aspect was not assigned to this finding.

Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
INCORRECT CLASSIFICATION OF ENVIRONMENTAL QUALIFICATION ZONES

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50.49(e) when licensee personnel failed to correctly classify the EDGs, essential switchgear (ESG), and MEERs containing electrical equipment important to safety. Specifically, the licensee's environmental qualification (EQ) program did not take into consideration the temperature and humidity changes expected for these rooms following a turbine building HELB and improperly classified these rooms as mild environments subjected to abnormal conditions instead of harsh environments. The licensee entered this issue into their CAP as IR 1288474. Corrective actions included an assignment for Corporate Engineering to provide a recommended environmental classification for the rooms where the abnormal conditions, due to a turbine building HELB event, were expected to occur. The finding was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 4, "Phase I Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The finding screened as having very low safety significance since it was not a design or qualification deficiency confirmed not to result in a loss of operability or functionality. This finding was not indicative of current performance and therefore was not assigned a cross-cutting aspect because the EQ classification of the rooms was completed in 1992.

Inspection Report# : 2012002 *(pdf)*

Barrier Integrity

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: VIO Violation
FAILURE TO ANALYZE RECYCLE HOLDUP TANK INLET PIPING LOADS
The inspectors identified a finding of very low safety significance (Green) and an associated cited violation (VIO) of 10 CFR 50, Appendix B, Criterion III, "Design Control," when licensee personnel failed to evaluate the effect of dynamic loads on inlet piping from Unit 1 and Unit 2 Residual Heat Removal (RHR) suction relief valves that discharge to the Recycle Holdup Tank (RHUT); and, as a result, failed to verify the adequacy of the RHUT design to withstand design loads that resulted from a discharge from RHR system suction relief valves into the RHUT. As of September 30, 2012, IR 649581, Assignment 8 to resolve the potential over-pressurization of the RHUT had not been completed. At the end of the inspection period, licensee efforts to complete and refine a model to determine whether physical modifications were necessary were still in progress. It remained unclear whether a physical modification would be necessary; when that determination would be made; and if a physical modification was necessary, when that modification would be completed.
The inspectors determined that the licensee's failure to evaluate the effect of dynamic water hammer loads on inlet piping from Unit 1 and Unit 2 RHR suction relief valves that discharge to the RHUT was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because it was associated with the Design Control attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee's existing design and piping configuration had not addressed water hammer effects when the Unit 1 and Unit 2 RHR suction relief valves were aligned to discharge to the RHUT, which could rupture the inlet piping and potentially affect offsite dose consequences. The NRC Senior Reactor Analysts (SRAs) concluded that the risk significance associated with the finding was of very low safety significance (Green). This finding had a cross-cutting aspect in the Corrective Action Program component of the Problem Identification and Resolution cross-cutting area because the licensee failed to take timely corrective actions to address a previously issued NCV (P.1(d)).

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Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO SUBMIT A 10 CFR 50.72(b)(3)(v) AND A 10 CFR 50.73(a)(2)(v) REPORT; INOPERABLE ULTIMATE HEAT SINK
The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v) and 10 CFR 50.73(a)(2)(v) when licensee personnel failed to report a condition that resulted in a loss of safety function after the UHS was declared inoperable after exceeding the TS limit of 100 degrees Fahrenheit (°F). Specifically, on July 7, 2012, the licensee had identified and entered TS 3.7.9, “Ultimate Heat Sink,” Condition (A), “Ultimate Heat Sink Inoperable,” after the UHS lake temperature exceeded the TS 3.7.9.2 Surveillance Requirement value of less than or equal to 100°F. The inspectors determined that although this condition represented a loss of safety function in accordance with the 10 CFR 50.72 and 10 CFR 50.73 reporting requirements and NUREG-1022, “Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73,” Revision 2, the condition was not reported as required. This issue was entered into the licensee’s CAP as IR 1422296. Corrective actions included an action to report this event in accordance with NRC requirements.
The inspectors determined that the failure to submit a report required by 10 CFR 50.72 and a Licensee Event Report (LER) required by 10 CFR 50.73 for a loss of safety function after the UHS was declared inoperable on July 7, 2012, was a performance deficiency. This violation had the potential to impact the regulatory process based, in part, on the generic communications that 10 CFR 50.72 and 10 CFR 50.73 reports serve, the required ROP inspection reviews that the NRC performs on all LERs, and the potential impact on licensee performance assessment. The inspectors determined that this issue was a Severity Level IV violation based on similar examples referenced in Section 6.9 of the NRC Enforcement Policy. Specifically, Example 9, “The licensee fails to make a report required by 10 CFR 50.72 or 10 CFR 50.73,” and Example 10, “A failure to identify all applicable reporting codes on a Licensee Event Report that may impact the completeness or accuracy of other information (e.g., performance indicator data) submitted to the NRC.” Because cross cutting aspects do not apply to traditional enforcement issues, no cross-cutting aspect was assigned.

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Last modified : February 28, 2013