Braidwood 1
1Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM A REQUIRED 10 CFR 50.59 EVALUATION
The inspectors identified a finding of very low safety significance and an associated Severity Level IV NCV of 10 CFR 50.59, “Changes, Tests, and Experiments,” when licensee personnel failed to perform and maintain a written evaluation to demonstrate that a procedure change did not require a license amendment. Specifically, the licensee implemented a change to procedures 1/2BwOA SEC-4, “Loss of Instrument Air,” Revision 3, that revised the actions to address a loss of component cooling water (CC) to the reactor coolant pump (RCP) thermal barrier heat exchange such that a complete loss of seal cooling could occur, which would result in damage to the RCP seals and a subsequent loss of coolant accident (LOCA). As part of the licensee corrective actions, procedures 1/2 BwOA SEC-4 were revised to address the issue. A revised 10 CFR 50.59 evaluation was also developed and approved. The performance deficiency was determined to be more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” because it could be reasonably viewed as a precursor to a significant event. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 2, for the Initiating Events cornerstone. The inspectors then answered ‘No’ to all of the screening questions in Table 3. The finding was further evaluated using IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 1. The inspectors answered ‘No’ to all of the questions contained therein. Therefore, the inspectors concluded the finding was of very low safety significance (Green). Because the associated finding was determined to be of very low safety significance in accordance with the SDP, the traditional enforcement aspect of this issue was determined to be at the Severity Level IV level. The inspectors did not identify a cross-cutting aspect associated with this finding since it was not indicative of current performance.

Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 30, 2013
Identified By: NRC
Item Type: FIN Finding
FAILURE TO PERFORM A REQUIRED 10 CFR 50.59 EVALUATION
The inspectors identified a finding of very low safety significance and an associated Severity Level IV NCV of 10 CFR 50.59, “Changes, Tests, and Experiments,” when licensee personnel failed to perform and maintain a written evaluation to demonstrate that a procedure change did not require a license amendment. Specifically, the licensee implemented a change to procedures 1/2BwOA SEC-4, “Loss of Instrument Air,” Revision 3, that revised the actions to address a loss of component cooling water (CC) to the reactor coolant pump (RCP) thermal barrier heat exchange such that a complete loss of seal cooling could occur, which would result in damage to the RCP seals and a subsequent loss of coolant accident (LOCA). As part of the licensee corrective actions, procedures 1/2 BwOA SEC-4 were revised to address the issue. A revised 10 CFR 50.59 evaluation was also developed and approved. The performance deficiency was determined to be more than minor in accordance with IMC 0612, “Power Reactor

Inspection Reports," Appendix B, "Issue Screening," because it could be reasonably viewed as a precursor to a significant event. The inspectors determined the finding could be evaluated using the Significance Determination Process (SDP) in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 2, for the Initiating Events cornerstone. The inspectors then answered 'No' to all of the screening questions in Table 3. The finding was further evaluated using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 1. The inspectors answered 'No' to all of the questions contained therein. Therefore, the inspectors concluded the finding was of very low safety significance (Green). Because the associated finding was determined to be of very low safety significance in accordance with the SDP, the traditional enforcement aspect of this issue was determined to be at the Severity Level IV level. The inspectors did not identify a cross-cutting aspect associated with this finding since it was not indicative of current performance.

Inspection Report# : 2013004 *(pdf)*

Significance: G Aug 30, 2013
Identified By: NRC
Item Type: FIN Finding
Failure to Adequately Evaluate SAT Overcurrent Relay Settings in Design Calculations.
The inspectors identified a finding of very low safety significance for the licensee's failure to ensure the system auxiliary transformer (SAT) 242-1 overcurrent relay provided protection coordination with upstream and downstream protective devices as required by Institute of Electrical and Electronics Engineers (IEEE)-242 and Design Document RPS-TG-3. Specifically, the licensee failed to demonstrate the relays would have provided upstream directional discrimination to allow the offsite power to clear a system fault before disconnecting the plant from the grid. The licensee entered this issue into their corrective action program and after further evaluation concluded the SAT overcurrent relay settings were still acceptable.

The inspectors determined the performance deficiency was more than minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, it would have increased the likelihood of events that upset plant stability and affected the availability and reliability of the preferred alternating current (AC) power supply. The inspectors determined the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.
Inspection Report# : 2013007 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE ENTRY CRITERIA FOR INTAKE FRAZIL ICING CONDITIONS ABNORMAL OPERATING PROCEDURE
The inspectors identified a finding of very low safety significance and an associated NCV of TS 5.4.1, "Procedures" when licensee personnel failed to specify adequate entry conditions in the station Abnormal Operating Procedure (AOP) that would be utilized to monitor and mitigate a frazil icing event at the lake screen house. Specifically, the licensee had established the entry condition of (Lake Temperature = 32 °F) without adequately considering the

resources available to the control room operators and supervisors and without accounting for the necessary margin. The licensee entered this issue into their Corrective Action Program as Issue Reports (IRs) 1613506, and 1617385. Corrective action consisted of changing the entry conditions based specifically upon essential service water temperature with margin to account of uncertainty and heat input.
The inspectors determined that the performance deficiency was more than minor because it was associated with the Procedural Quality attribute of the Mitigating System 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, failure to establish and maintain adequate entry conditions into this station AOP could result in additional time for ice to accumulate on plant components before mitigating actions would be initiated. Any delay in mitigating this type of event could increase the likelihood of a loss or partial loss of essential service water event or other type of transient (e.g., loss of instrument air, and reactor trip). A detailed risk evaluation was performed by an NRC Regional Senior Risk Analysis and the significance of this finding was determined to be of very low safety significance (Green). This finding did not have an associated cross cutting aspect because the inspectors determined that the most significant cause of the error was when the entry criteria was established in November 2010 and, therefore, not indicative of recent performance.

Inspection Report# : 2014002 *(pdf)*

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ENSURE MITIGATING SYSTEM AVAILABILITY AND RELIABILITY DURING WEATHER CONDITIONS THAT COULD PROMOTE FRAZIL ICE AT THE LAKE SCREEN HOUSE
The inspectors identified a finding of very low safety significance (Green) when licensee personnel failed to ensure that the lake screen house trash rake would be capable of clearing ice buildup upon the trash rake bars. Specifically, the licensee failed to ensure that the trash rake system was functional prior to the onset of weather conditions that could promote frazil ice production and, secondly, upon repair of the a failure during those conditions. The licensee corrected this issue by utilizing a vendor to re-furbish and repair the trash rake. Additionally, the licensee proceduralized additional methods to clear ice from the trash bars.
The inspectors determined that the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating System 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, failure to have any systems available during weather conditions that could promote frazil icing of the lake intake increases the likelihood of a plant transient including a loss of essential service water event. The inspectors determined that the finding was of very low safety significance (Green) by evaluating the issue through a detail risk evaluation. This finding had a cross cutting aspect in the area of Problem Identification and Resolution, Resolution, because the organization failed to take effective corrective action to address a non-function lake screen house trash rake in an adequate manner after restoring the equipment to Operations for use during weather conditions that could promote frazil icing conditions.

Inspection Report# : 2014002 *(pdf)*

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY FIRE DOORS THAT DO NOT CONFORM TO NFPA CODES AND STANDARDS
The inspectors identified a finding of very low safety significance (Green) and associated NCV of Braidwood Operating License Condition 2.E, “Fire Protection Program,” when licensee personnel failed to identify fire doors that

do not conform to the current licensing basis standard within the National Fire Protection Agency (NFPA)-80 code that requires fire doors to automatically shut and latch without assistance. Specifically, station personnel were not following a daily fire door testing procedure and, therefore, not identifying a number of fire doors that were not conforming to the standard. As a result, unlocked fire doors were not tested properly, and IRs were not generated when degraded conditions existed. In addition, station personnel did not recognize the standard of ensuring fire doors close without assistance. Corrective actions included training the plant operators on the expectations regarding generation of IRs for any abnormal condition in the plant, and requiring the use of a copy of the surveillance procedure in the field while completing the daily door surveillance.
The finding was determined to be more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, licensee personnel did not identify a number of fire doors that were not capable of closing and latching without assistance which would impact the door's ability to perform its design function. In the two instances, Fire Door D-383 was found open and unattended and, therefore, in accordance with station processes, non functional. Using Attachment 1 of Appendix F, "Fire Protection and Post Fire Safe Shutdown SDP," the inspectors determined that the finding category was "Fire Confinement," that the finding did not impact the ability of the plant to achieve safe shutdown. As a result, the finding screened as very low safety significance (Green). This finding had a cross cutting aspect in the area of Human Performance, Procedure Adherence, because the licensee personnel did not follow procedures, processes and work instructions. Specifically, the licensee did not have the fire door testing procedure in hand while performing the surveillance and as a result was could not specifically place keep and follow the steps.

Inspection Report# : 2014002 *(pdf)*

Significance: N/A Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN ACCURATE OPERATOR LOGS
The inspectors identified a Severity Level IV NCV of 10 CFR 50.9(a), "Completeness and Accuracy of Information," when licensee personnel failed to provide complete and accurate operator logs of record. Specifically, operator log entries of record on May 9, 2013, did not accurately document entry into and exit from Limiting Condition for Operation (LCO) 3.0.3. Initial corrective actions included additional late log entries and issuance of Operations Standing Order 13 10, "Corrections to Electronic Log Entries," which provided interim guidance to operators regarding how to make revisions to electronic log entries. The Operations Director also initiated discussions with the fleet Operations Director peer group to determine how to incorporate guidance on revising electronic logs into procedure OP AA 111 101, "Operating Narrative Logs and Records." The licensee entered this issue into their Corrective Action Program (CAP) as Issue Report (IR) 1519660, "Lack of Details in Log Entries." In consultation with regional enforcement staff, the inspectors determined that the issue was more than minor because operator logs of record are material documents to the NRC, in that inspection activities are planned and conducted based, in part, on the review of operator logs and the presumption of their accuracy. In determining the significance of the violation, the inspectors referenced the examples of violations in Section 6.9, "Inaccurate and Incomplete Information or Failure to a Make a Required Report," of the NRC Enforcement Policy. Because the issue was determined to be more than minor, but did not meet the threshold of the examples of Severity Level I, II, or III violations, the inspectors determined this issue was a Severity Level IV violation. Because a more than minor Reactor Oversight Process finding was not identified, there was no cross cutting aspect associated with this violation.

Inspection Report# : 2013005 *(pdf)*

Significance: G Aug 30, 2013
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Ensure Six Component Cooling (CC) System Manual Valves Were in the Correct Position as Required by Technical Specification (TS) Surveillance Requirement (SR) 3.7.7.1.
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specification Surveillance Requirement 3.7.7.1, for the licensee's failure to ensure six component cooling (CC) system manual valves in the flow path servicing safety-related equipment, that were not locked, sealed, or otherwise secured in position, were verified in the correct position every 31 days. The licensee entered this finding into their Correction Action Program, verified the correct position of the six CC system manual valves, and revised surveillance procedures to include the requirement to periodically verify the correct position of these valves.

The performance deficiency was determined to be more than minor because it was similar to IMC 0612, Appendix E, Example 3.c, since more than one valve was in the required position, but not locked, sealed, or otherwise secured in the correct position, and it impacted the Mitigating Systems cornerstone's objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences, (i.e., core damage). Since the finding did not represent an actual loss of safety function, the inspectors screened the finding as having very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Aug 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate Accident Flows in Component Cooling Water Pump Net Positive Suction Head Calculations.
The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to incorporate accident flows in component cooling water (CCW) pump net positive suction head (NPSH) available calculations. Specifically, the licensee failed to calculate the NPSH for the CCW pumps using the run-out flows, which would have resulted in much lower available NPSH. The licensee entered this issue into their Corrective Action Program and recalculated the CCW pump available NPSH and determined that margin remained.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control and affected the cornerstone objective of ensuring the capability of the CCW system to respond to an initiating event to prevent undesirable consequences. Specifically, by failing to consider the accident loads in the CCW pumps NPSH calculations there was reasonable doubt as to whether the CCW pumps would have been operable during accident conditions. The inspectors determined that the finding was of very low safety significance (Green) because it did not result in the loss of operability or an actual loss of the CCW system. The inspectors did not identify a cross cutting aspect associated with this finding because the finding was not representative of current performance.
Inspection Report# : 2013007 *(pdf)*

Significance: G Aug 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Consider Adequate Tornado Missile Protection in SX Discharge Pipe.
The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to consider design control measures commensurate with those applied to the original essential service water (SX) design related to tornado missile protection. Specifically, the

licensee processed a physical modification to the SX discharge pipe and failed to protect or evaluate the exposed portion from potential tornado missiles. The licensee entered this issue into their Corrective Action Program and showed by calculation that the modified SX pipe would shear off upon impact from the design basis tornado missile and the safety-related portion would be unharmed and capable of performing its intended function.

The inspectors determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control and affected the cornerstone objective of ensuring the capability of the SX system to respond to an initiating event to prevent undesirable consequences. Specifically, by failing to consider tornado missile protection in the SX design, there was reasonable doubt as to whether the SX pumps would have been operable during accident conditions. Since the finding would degrade two or more trains of a multi-train system or function, the inspectors determined a Detailed Risk-Evaluation was required. Based on the Detailed Risk-Evaluation, the Senior Reactor Analysts determined the delta core damage frequency for the finding was 6.66E-7/yr and was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Aug 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Consider Multiple Failures in the Emergency Operating Procedures (EOPs) 1(2)BwEP ES 1.3, "Transfer to Cold leg Recirculation" as Required by Technical Specification.
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of Technical Specification, Section 5.4.1b for the licensee's failure to establish the necessary actions as required in Emergency Operating Procedures (EOPs) 1(2)BwEP ES 1.3, "Transfer to Cold Leg Recirculation," Revision 201. Specifically, the licensee failed to ensure EOPs 1(2)BwEP ES 1.3 contained the necessary actions for transition to 1(2)BwCA-1.1, "Loss of Emergency Coolant Recirculation" for a small loss of coolant accident (SLOCA) or medium loss of coolant accident (MLOCA) with a concurrent failure of residual heat removal (RHR) heat exchanger (HX) to safety injection (SI) and centrifugal charging pump (CCP) isolation valves. The licensee entered this finding into their Correction Action Program to revise the subject procedures.

The finding was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of procedure quality and affected the cornerstone's 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 ensure the procedure for establishing containment sump recirculation for a SLOCA or MLOCA contained the necessary actions for potential equipment failures. Since the finding resulted in the potential for a loss of the containment sump recirculation function during a SLOCA or MLOCA for certain equipment failures when transferring to containment sump recirculation, the inspectors determined a Detailed Risk-Evaluation was required. Based on the Detailed Risk-Evaluation, the Senior Reactor Analysts determined the delta core damage frequency for the finding was 1.0E-8/yr. and was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: FIN Finding
FAILURE TO IDENTIFY AND CORRECT DEGRADED DOST ROOM SUMP PUMP DISCHARGE

CHECK VALVES
The inspectors identified a finding of very low safety significance when licensee personnel failed to identify degraded Diesel Oil Storage Tank (DOST) room sump discharge check valves in 2013 and after performing periodic testing in 2005. The licensee entered this issue into their Corrective Action Program (CAP) as Issue Report (IR) 1526652, "IR Not Generated as Required – 2005 OD Check Valve UT [Ultrasonic Testing] Results." Corrective actions included the repair of the degraded DOST room sump check valves. The inspectors determined that the failure to identify issues associated with degraded DOST room sump pump discharge check valves was a performance deficiency. The inspectors determined that the performance deficiency was 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). Since the finding resulted in the potential for a loss of the emergency power function during a turbine building flooding event, and based upon an actual DOST room sump check valve failure, a detailed risk evaluation was performed, which determined that the finding was of very low safety significance. This finding had a cross cutting aspect in the Corrective Action Program component of the Problem Identification and Resolution (PI&R) cross cutting area because the licensee failed to take appropriate corrective actions in a timely manner to address degraded DOST room sump check valves.

Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO SCOPE NONSAFETY RELATED TURBINE BUILDING TO AUXILIARY BUILDING SUMP PUMP DISCHARGE CHECK VALVES INTO THE MAINTENANCE RULE
The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR 50.65(b)(2)(ii) when licensee personnel failed to scope four Unit 1 and Unit 2 Essential Service Water (SX) pump room sump pump discharge check valves and eight Unit 1 and Unit 2 DOST room sump pump discharge check valves into the Maintenance Rule as required. The licensee entered this issue into their CAP as IR 1498897, "Review 1/2WF040A/B Valves for Inclusion Into MRule [Maintenance Rule]," and planned to scope the components into the Maintenance Rule. The inspectors determined that the failure to scope the Unit 1 and Unit 2 SX pump room sump pump discharge check valves and Unit 1 and Unit 2 DOST room sump pump discharge check valves into the Maintenance Rule was a performance deficiency. The inspectors determined that the performance deficiency was more than minor because, if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Since a degraded SX or DOST sump check valve would degrade one or more trains of a system that supported a risk-significant system or function, a detailed risk evaluation was performed that determined the finding was of very low safety significance. 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 assumptions readily available in the applicable guidance document to demonstrate that not scoping the components into the Maintenance Rule was in accordance with Maintenance Rule requirements and therefore maintained safety.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: Self-Revealing
Item Type: FIN Finding
INADEQUATE FUNCTIONALITY EVALUATIONS FOR A DEGRADED UNIT 1 BORIC ACID STORAGE TANK BLADDER
A finding of very low safety significance was self revealed when licensee personnel performed inadequate functionality evaluations after previously identifying that the Unit 1 Boric Acid Storage Tank (BAST) bladder was degraded. The licensee entered this issue into their CAP as IR 1498696, "Secured Boric Acid Tank Transfer Earlier

Than Expected." Corrective actions included the replacement of the Unit 1 and Unit 2 BAST bladders. The inspectors determined that the failure to adequately evaluate Unit 1 BAST system functionality after identifying that the Unit 1 BAST bladder had substantially degraded was a performance deficiency. The inspectors determined the performance deficiency was 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 screened the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors answered 'No' to all of the Mitigating System Screening questions for Reactivity Control Systems, therefore the finding screened as having very low safety significance. This finding had a cross cutting aspect in the Operating Experience component of the PI&R cross cutting area because the licensee failed to implement and institutionalize Operating Experience that specifically discussed the potential adverse consequences that a degraded tank bladder could have on plant safety.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
INADVERTENT REMOVAL OF THE DESIGN BASIS REQUIREMENT TO COMMENCE A COOLDOWN WITHIN TWO HOURS FOLLOWING THE ESTABLISHMENT OF NATURAL CIRCULATION CONDITIONS AND LOSS OF AIR TO CONTAINMENT
The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," when licensee personnel failed to maintain the procedural requirement to commence a reactor coolant system (RCS) cooldown within 2 hours following a design basis seismic event that included a reactor trip, failure of all nonsafety related equipment, and limiting single active failure. The licensee entered this issue into their CAP as IR 1496506, "NRC Identified PZR [Pressurizer] PORV [Power-Operated Relief Valve] Natural Circulation Cooldown Analysis." Corrective actions included development of a revised instruction in the Emergency Operating Procedures (EOPs). The inspectors determined that the failure to adequately revise an EOP was a performance deficiency. Specifically, the licensee removed a procedural requirement to commence an RCS natural circulation cooldown if instrument air was lost to containment, which inadvertently could adversely affect a safety related PZR PORV function. The inspectors determined that the performance deficiency was more than minor because it was associated with the Procedural 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.) The inspectors evaluated this finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and determined that this finding was of very low safety significance because the issue was determined to not be a confirmed loss of operability or functionality. This finding had a cross cutting aspect in the Corrective Action Program component of the PI&R cross cutting area because licensee personnel failed to thoroughly evaluate a problem and ensure that the resolution adequately addressed the cause and extent of condition, as necessary. Specifically, the licensee failed to adequately evaluate a prior NRC finding such that the corrective actions adequately addressed the problem.

Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ACCOUNT FOR PZR PORV ACCUMULATOR LEAKAGE DURING HOT STANDBY AND SUBSEQUENT COOLDOWN PERIOD FOLLOWING A POSTULATED EARTHQUAKE
The inspectors identified a finding of very low safety significance and an associated non-cited violation of 10 CFR

Part 50, Appendix B, Criterion III, "Design Control," when licensee personnel failed to account for PZR PORV accumulator air system leakage during the assumed 2 hour time spent in hot standby following a limiting seismic event. The licensee entered this issue into their CAP as IR 1481590, "NRC Question Regarding Pressurizer PORV Accumulator Leakage." As part of their corrective actions, the licensee planned to revise procedures and seek clarification from the NRC concerning the licensing basis of the auxiliary spray system. The inspectors determined that the failure to ensure that the PZR PORVs could perform their credited safety function following a limiting seismic event 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 IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and determined that the finding was of very low safety significance because the issue was determined to not be a confirmed loss of operability or functionality. This finding had a cross cutting aspect in the Corrective Action Program component of the PI&R cross cutting area because the licensee failed to thoroughly evaluate a problem such that the resolution addressed causes and extent of condition, as necessary. Specifically, the licensee failed to adequately evaluate not accounting for PZR PORV air accumulator leakage in the natural circulation cooldown current licensing basis (CLB) due to the reliance on another system to provide the credited safety function.
Inspection Report# : 2013003 *(pdf)*

Barrier Integrity

Significance: G Aug 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Procedures for Shutdown Loss of Coolant Accident (LOCA) Not Appropriate If RCS Leakage Is Isolated.
The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to ensure abnormal operating Procedures (AOPs) 1(2)BwOA S/D-2, "Shutdown LOCA," Revision 104 (105 for Unit 2) contained the necessary actions to immediately terminate Safety Injection (SI) flow if reactor coolant system (RCS) leakage was isolated. Specifically, the licensee failed to update 1(2)BwOA S/D-2, "Shutdown LOCA" to Revision 2 of the Westinghouse Owners Group (WOG) Abnormal Response Guideline (ARG)-2, "Shutdown LOCA," that resulted in a CAUTION not added to terminate SI flow in a timely manner to prevent RCS over-pressurization, if RCS leakage was isolated. The licensee entered this finding into their Correction Action Program to add the CAUTION statement in the procedure.
The finding was determined to be more than minor because it was associated with the Barrier Integrity cornerstone attribute of procedure quality and affected the cornerstone's objective of providing reasonable assurance that physical design barriers protect the public from radioactive releases caused by accidents or events. Operations in accordance with the procedure may have challenged the RCS barrier during a shutdown LOCA event. Specifically, the licensee failed to update Procedure 1(2)BwOA S/D-2, "Shutdown LOCA" to Revision 2 of the WOG ARG-2, "Shutdown LOCA" guideline that resulted in a CAUTION that was not added to terminate SI flow in a timely manner to prevent RCS over-pressurization, if RCS leakage was isolated. The inspectors conducted an assessment of the risk significance of the issue in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined the finding did not require a Phase II assessment and was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.
Inspection Report# : 2013007 *(pdf)*

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)).

Inspection Report# : 2012004 *(pdf)*

Emergency Preparedness

Significance: N/A Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO SUBMIT A REPORT REQUIRED BY 10 CFR 50.72(b)(3)(xiii)
The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(xiii) when licensee personnel failed to submit a report required by 10 CFR 50.72 for a loss of emergency assessment capability when an unplanned degradation was identified associated with the Technical Support Center (TSC) ventilation filtered make-up train. Specifically, the discharge damper for the TSC ventilation filtered make up fan was found unexpectedly closed, which adversely impacted the ability to supply filtered air to the TSC absent implementation of compensatory actions. Corrective actions included making the required Event Report on January 14, 2014. The licensee entered this issue into their CAP as IR 1598598, "Wording Differences Between NUREG-1022 and Reportability Manual," and IR 1608133, "ENS [Event Notification System] Call Made Due to TSC Ventilation Impact in October 2013." The inspectors determined that this issue had the potential to impact the regulatory process based, in part, on the generic communications input that 10 CFR 50.72 reports serve. Since the issue impacted the regulatory process, it was dispositioned through the traditional enforcement process. The inspectors determined that this issue was a Severity Level IV violation based upon Example 6.d.9 in the NRC Enforcement Policy. Example 6.d.9 specifically stated, "The

licensee fails to make a report requirement by 10 CFR 50.72 or 10 CFR 50.73." Because a more than minor Reactor Oversight Process finding was not identified, there was no cross cutting aspect associated with this violation.
Inspection Report# : 2013005 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE AND TECHNICAL SPECIFICATION ASSOCIATED WITH CONTROL FOR HIGH AND LOCKED HIGH RADIATION AREAS
The inspectors identified a self revealed finding of very low safety significance and an associated NCV of Technical Specification 5.7.1 when licensee personnel failed to adequately monitor and provide positive control over activities within a high radiation area that was greater than 100 millirem per hour (mrem/hr) but less than or equal to 1000 mrem/hr from a radiation source which was created during the cycling of valve 1RH8701B inside the missile barrier in containment. A slug of material dislodged from the valve and was transported to a location that resulted in localized elevated dose rates where an individual was performing work. As an immediate corrective action, the licensee instituted appropriate radiation protection controls and initiated an Apparent Cause Evaluation (ACE) to review the event in more detail. The licensee entered this issue into their CAP as IR 1559430, "ED [Electronic Dosimeter] Dose Rate Alarm Received." The performance deficiency was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, not evaluating the radiological impact of the slug of radioactive material being transported to an area where a worker was performing work caused the worker to receive unnecessary and unplanned exposure to radiation that if left uncorrected could lead to a more significant safety concern in that a worker could receive a much higher dose under different circumstances. The inspectors determined that the finding was of very low safety significance (Green) using IMC 0609, Appendix C. This finding had a cross-cutting aspect in the Work Practices component of the Human Performance cross-cutting area because licensee personnel failed to validate and communicate the changing dose rates of the work area after Operations personnel performed work that affected the dose rates in the work area (H.4(a)).
Inspection Report# : 2013005 *(pdf)*

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: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE CONTROL OF A SPECIAL LIFTING DEVICE
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," when licensee personnel failed to adhere to design requirements specified for a special lifting device used to handle a transfer cask containing spent nuclear fuel in the vicinity of the spent fuel pool. The licensee entered this issue into their CAP as IR 1509204, "Required NDE [Nondestructive Examination] Not Performed on Lift Yoke," and IR 1509602, "Lift Yoke Stud Nuts Not Lock Wired." As part of their corrective actions, the licensee performed required tests and installed lock wire in accordance with design drawings prior to conducting additional lifts with the special lifting device. The inspectors determined that the failure to adhere to design drawings and American National Standards Institute (ANSI) requirements for annual testing of a special lifting device 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 impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radioactive releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." The inspectors answered 'No' to all the screening questions in Appendix A, Exhibit 3, and therefore the finding screened as having very low safety significance. This finding had a cross cutting aspect in the Resources component of the Human Performance cross cutting area since the licensee failed to have complete, accurate, and up to date design documentation and procedures that ensured personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety. Specifically the licensee's procedures for annual testing of a special lifting device lacked specific guidance, and design changes were made that conflicted with design drawings.
Inspection Report# : 2013003 *(pdf)*

Significance: N/A Mar 31, 2009
Identified By: NRC
Item Type: AV Apparent Violation
Apparent Violation for Exelon Plants - 1 (2009 Findings)
For apparent violation #1:
Contrary to the above, on March 31, 2009 Exelon Generation Company, LLC (Exelon) provided incomplete and inaccurate information on the status of its decommissioning funding, as required by 10 CFR 50.75 when it submitted the decommissioning funding status report. Specifically, the March 31, 2009, decommissioning funding status (DFS) report contained inaccurate and incomplete information regarding Exelon's compliance with the requirements of 10 CFR 50.75. The report stated that the amount listed for each of the reactors was determined in accordance with 10 CFR 50.75(b) and the applicable formulas of 10 CFR 50.75(c). However, for each of the 23 reactors, the amount reported was a discounted value that was less than the minimum required amount specified by 10 CFR 50.75(b) and (c). The report was material to the NRC because Exelon under-reported its certified decommissioning amounts by approximately $4 billion, and the NRC staff evaluated the status of Exelon's decommissioning funds based on the inaccurate reports. After identifying the inaccurate information, the NRC required parent company guarantees before the staff could make its determination that there was reasonable assurance that funds will be available for the decommissioning process.
Inspection Report# : 2013202 *(pdf)*
Inspection Report# : 2012012 *(pdf)*

Significance: N/A Mar 31, 2009
Identified By: NRC

Item Type: AV Apparent Violation
Apparent Violation for Exelon Plants - 2 (2009 Findings)
For apparent violation #2:
Contrary to the above, on March 31, 2007, and March 31, 2005, Exelon Generation Company, LLC (Exelon) provided incomplete and inaccurate information on the status of its decommissioning funding, as required by 10 CFR 50.75 when it submitted the decommissioning funding status reports. Specifically, the March 31, 2007, and March 31, 2005, decommissioning funding status (DFS) reports contained inaccurate and incomplete information regarding Exelon's compliance with the requirements of 10 CFR 50.75. The reports stated that the amount listed for each of the reactors was determined in accordance with 10 CFR 50.75(b) and the applicable formulas of 10 CFR 50.75(c). However, in multiple instances, the amount reported was a discounted value that was less than the minimum required amount specified by 10 CFR 50.75(b) and (c). The reports were material to the NRC because Exelon under-reported its certified decommissioning amounts, and the NRC staff evaluated the status of Exelon's decommissioning funds based on the inaccurate reports. After identifying the inaccurate information, the NRC required parent company guarantees before the staff could make its determination that there was reasonable assurance that funds will be available for the decommissioning process.
Inspection Report# : 2012012 *(pdf)*
Inspection Report# : 2013202 *(pdf)*

Last modified : May 30, 2014