

Braidwood 2

2Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

UNIT 2 LOSS OF OFFSITE POWER COINCIDENT WITH A REACTOR TRIP DUE TO LOSS OF 2C REACTOR COOLANT PUMP

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

Inspection Report# : [2010003](#) (*pdf*)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FULLY IMPLEMENT ABNORMAL OPERATING PROCEDURES FOLLOWING A SEISMIC EVENT

The inspectors identified a Green finding and an associated Non-Cited Violation of Technical Specification 5.4.1 for the failure to fully implement an abnormal procedure following a seismic event. Specifically, on April 18, 2008, following a seismic event, the licensee chose to perform field walkdowns to verify that sulfuric acid and sodium hypochlorite tanks were intact rather than to isolate control room ventilation as required by Procedure 0BwOA ENV-4, "Earthquake." As a corrective action, the licensee performed training activities to clarify when procedural deviations are allowed. The finding was determined to be more than minor because it impacted the procedure quality attribute of the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the finding in accordance with IMC 0612, Appendix B, "Issue Screening." The inspectors performed a significance evaluation in accordance with IMC 0609, Attachment 4, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors answered 'No' to the external event initiators question in the

Initiating Events Cornerstone column of Table 4a and the issue screened as one of very low safety significance. This finding is associated with the cross-cutting attribute of decision making in the Human Performance cross-cutting component (H.1(b)). Specifically, the licensee did not use conservative assumptions in the decision to send an operator to locally verify rather than perform a procedural step from the control room as written. In the event the sulfuric acid and sodium hypochlorite tanks were damaged, the control room operators could have been impacted with chlorine gas prior to receiving verification from the locally dispatched operator since the licensee elected not to isolate control room ventilation.

Inspection Report# : [2009005](#) (pdf)

Mitigating Systems

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

DDAFW Pump Battery Racks were not restored to their Design Basis Seismic Category I

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance for the licensee's failure to restore the Diesel Driven Auxiliary Feedwater (DDAFW) battery racks to their design basis qualification, Seismic Category I. Specifically, although the licensee identified the existence of gaps between the wooden spacer blocks, batteries and end of racks in 2004 the licensee failed to provide adequate justification to demonstrate that the existing condition still met the Seismic Category I Design Basis requirements as specified in their design documents. The gaps between the wooden spacer blocks could affect the reliability of the DDAFW DC safety-related batteries being that this component was outside its design basis for over a period of six years. The licensee subsequently entered the issue into their corrective action program and restored the batteries racks to their design requirements.

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

Inspection Report# : [2010007](#) (pdf)

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Calculation for the DDAFW Minimum Fuel oil Tank Setpoint Level

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance related to the licensee's failure to develop a calculation for the DDAFW pump minimum fuel oil tank level setpoint. Specifically, the licensee failed to perform a calculation specific to the DDAFW pump day tank to verify the 74 percent level indication was equivalent to the 420 gallons of usable fuel volume that was required by the Technical Specifications (TS). The licensee subsequently entered the issue into their corrective action program to develop design basis documentations.

This finding is more than minor because it was associated with the Mitigating Systems cornerstones attribute of design control and affected the cornerstone objective of ensuring the capability of the safety-related system to respond to initiating events to prevent undesirable consequences. Specifically, the licensee failure to verify that 74 percent tank level exceeded the TS value did not assure the pump was capable of performing its safety function for the entire seven hours mission time. This finding is of very low safety significance (Green) because subsequent calculation/evaluation

determined the volume of the tank at 74 percent level was slightly above the minimum required TS limit. The inspectors determined there was no cross-cutting aspect associated with this finding because the deficiency was a legacy design issue and, therefore, was not indicative of the plant's current performance.

Inspection Report# : [2010007](#) (pdf)

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Potential Clogging of Essential Service Water (SX) Throttle Valves for Pump Room Coolers

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the licensee's failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Specifically, the licensee's procedures for flow balancing Essential Service Water (SX) supply to safety-related pump room coolers did not include any precautionary statements to limit the degree to which branch loop throttle valves could be throttled down without introducing concerns about potential clogging from particulate in the service water and resultant flow reduction. The licensee subsequently entered the issue into their corrective action program and performed immediate corrective actions included, engineering evaluation to determine current operability, repositioned all throttle valves to at least $\frac{3}{4}$ turns open and revised the valve throttling procedure to prevent any valve from being throttled to less than $\frac{3}{4}$ turns open in the future.

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

Inspection Report# : [2010007](#) (pdf)

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Adverse Impact of Flood Drain Strainer Design Modification on Flooding Analysis

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance for the licensee's failure to fully verify the adequacy of a design modification important to safety. Specifically, the licensee failed to recognize that bag-type strainers back fitted into floor drains in the Auxiliary Building for the purpose of preventing debris from blocking the floor drain piping were designed in such a way that they actually increased the potential for blockage, thus negatively impacting the analysis of record for internal flooding. The licensee subsequently entered the issue into their corrective action program, performed preliminary evaluation of the affected areas and demonstrated operability. Additional action was initiated to revise the internal flooding calculation and safe shutdown analysis to address the impact of the floor drain strainers.

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

Inspection Report# : [2010007](#) (pdf)

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Non-Conservative Acceptance Criteria for CS Pump Performance Testing

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

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

Inspection Report# : [2010007](#) (pdf)

Significance:  Apr 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

EDGs Fuel Oil Consumption Calculation Failed to Account for Frequency Variations

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance for the licensee's failure to translate the allowable frequency variations, for the emergency diesel generators (EDGs), into the fuel consumption calculation. Specifically, the fuel oil consumption calculation for the EDGs did not assure that TS minimum required fuel limit of 44,000 gallons was adequate to support the EDGs operating at frequency higher than 60 Hertz (Hz) for the seven days mission time. As a result of the inspectors' questions, the licensee subsequently added an action item to an existing condition report to address frequency variation on fuel consumption.

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

Inspection Report# : [2010007](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IDENTIFY A CONDITION ADVERSE TO QUALITY

The NRC identified a finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to correct a Condition Adverse to Quality associated with the Unit 2A component cooling water heat exchanger. The licensee's corrective actions included initiating a new work request to repair the degradation during the next refueling outage, and determining how the work requests could be closed despite being properly tied to the corrective action program. This performance deficiency was considered more than minor because it was similar to example 3(g) in Appendix E of Inspection Manual Chapter 0612, in that a Condition Adverse to Quality was not corrected and it recurred, such that the operability of a mitigating system component was potentially affected. Because there was no actual loss of operability or functionality of the 2A component cooling water heat exchanger, the issue screened out as having very low safety significance (Green). This finding is associated with the cross-cutting area component of corrective action program in the problem identification and resolution cross-cutting area. Specifically, the licensee did not thoroughly evaluate why work requests to correct degradation of the 2A component cooling water heat exchanger were repeatedly cancelled with no actions taken and for unknown reasons (P.1(c)).

Inspection Report# : [2010002](#) (pdf)

Significance: SL-IV Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A 10 CFR 50.59 EVALUATION OF A TEMPORARY MODIFICATION TO THE 2B RVLIS PROBE

The inspectors identified a finding of very low safety significance and an associated Severity Level IV Non-Cited Violation for the failure to perform an adequate 10 CFR 50.59 screening of a temporary modification. Specifically, the licensee failed to recognize the impact of a temporary modification on emergency operating procedures, which resulted in the failure to perform a full evaluation of the modification. The licensee's corrective actions included reinforcing the current configuration of the 2B reactor vessel level indication system with operators and revising emergency operating procedures. In addition, the licensee plans to complete a full 10 CFR 50.59 evaluation to determine whether the modification required NRC approval prior to implementation.

The inspectors concluded that the violation was more than minor because the inspectors could not reasonably conclude that the modification would not require prior NRC approval based on the 10 CFR 50.59 screening. The inspectors answered 'no' to the Mitigating Systems cornerstone questions in Table 4 and, as a result, the issue screened as one of very low safety significance (Green). This finding is associated with the cross cutting area component of decision-making in the human performance cross cutting area. Specifically, when evaluating the operations impact of a new temporary modification on the 2B RVLIS probe, the licensee assumed the impact was unchanged from a prior temporary modification on the same equipment, which resulted in necessary procedure changes that were not identified (H.1(b)).

Inspection Report# : [2010002](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

DIESEL OIL STORAGE TANK ROOM SPRINKLER OBSTRUCTIONS

A finding of very low safety-significance and an associated Non-Cited Violation of Unit 2 License Condition 2.E was identified by the inspectors for the licensee's failure to provide foam sprinklers in the 2B diesel oil storage tank room that were free of obstructions. Specifically, the licensee failed to install all of the foam sprinklers in accordance with National Fire Protection Agency's NFPA-16-1980, "Standard for the Installation of Deluge Foam-Water Sprinkler Systems and Foam-Water Spray Systems," and NFPA-13-1985, "Standard for the Installation of Sprinkler Systems." The licensee entered the issue into their corrective action program for resolution and planned to evaluate the system and determine what modifications were required.

The finding was determined to be more than minor because the deficiencies affected the Mitigating Systems Cornerstone objective of ensuring the capability of systems to respond to initiating events such as fire. Specifically, the discharge of the foam spray may not reach a fire and could prevent the extinguishing agent from suppressing and extinguishing a diesel fuel oil spill fire because of the proximity of obstructions to the sprinklers. Because a fire involving a diesel oil storage tank room would only affect the associated emergency diesel generator and no other equipment would be affected, the issue was of very low safety-significance. No cross-cutting aspects were associated with this finding because it was not representative of current performance.

Inspection Report# : [2010002](#) (pdf)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ESTABLISH 2 TO 1 WELD PROFILE ON AF CROSS-TIE DRAIN LINE SOCKET WELDS

ed Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to follow work order instructions and establish a 2-to-1 weld profile on the auxiliary feedwater system cross-tie pipe drain line socket welds. Licensee corrective actions included rejecting the nonconforming welds, establishing interim guidance for the range of acceptable socket weld profiles, and initiating revisions to weld procedures to clarify applicable instructions. The inspectors determined that this finding was more than minor because, if left uncorrected, the failure to properly control maintenance activities could become a more significant safety concern. Specifically, the failure to implement a 2-to-1 socket weld profile could result in a vibration induced pipe fatigue failure affecting the operability of Unit 2 Auxiliary Feedwater System Train "A." This finding was of very low safety significance because it was a design or qualification deficiency, confirmed to not result in loss of operability or functionality. This finding has a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide adequate procedural resources (H.2(c)). Specifically, the licensee failed to ensure that the work instruction for the welding contained adequate guidance to implement the required 2-to-1 weld profile.

Inspection Report# : [2009005](#) (pdf)

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES DURING RESTORATION OF 2SX173

A Green finding and an associated Non-Cited Violation of Technical Specification 5.4.1 was self-revealed for the failure to follow procedures during the restoration of the essential service water supply valve to the engine driven cooling water pump for the 2B auxiliary feedwater pump (2SX173) following scheduled maintenance. This issue resulted in a water hammer occurring in the essential service water system. The licensee walked down the system to ensure that the essential service water system was not damaged. Additionally, the licensee developed training actions to emphasize procedural adherence. The inspectors determined the finding was more than minor because it impacted the Human Error attribute of the Mitigating System Cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors performed a significance evaluation in accordance with IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Operational Checklist for both PWRs and BWRs" Checklist 4, and determined that the finding did not increase the likelihood of a loss of RCS inventory, degrade the licensee's ability to terminate a leak path or add inventory, or degrade the licensee's ability to recover decay heat removal) DHR once it is lost, therefore the issue screened as one of very low safety significance (Green). This finding has a cross cutting aspect in the area of Human Performance, because the work supervisor did not make safety-significant or risk-significant decisions using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained (H.1(a)). The supervisor did not seek further guidance surrounding the observed conditions upon arrival at the work site.

Inspection Report# : [2009005](#) (pdf)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW MAINTENANCE PROCEDURES AND WORK INSTRUCTIONS

The inspectors identified a Green finding and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," related to post maintenance testing. Specifically, the licensee failed to follow maintenance procedures and work instructions by performing the post maintenance testing prior to completing work on the 2B Auxiliary Feedwater Pump Essential Service Water cooling water supply. Work that could have affected the operability of safety-related equipment was completed and the system returned to operable status without completing the necessary post maintenance testing. As part of the corrective actions for this issue, the licensee

retested the valve and revised the affected surveillance test procedure.

The inspectors concluded that the finding was more than minor because the licensee returned equipment to an operable status following maintenance without performing required testing. Licensee Procedure MA-AA-716-012, "Post Maintenance Testing," Revision 11, requires that "post maintenance testing shall be performed following any corrective and some preventive maintenance activities on plant equipment that may have impacted the equipment's ability to perform its intended function." The performance of a flow scan may impact the stroke time of a valve, therefore post maintenance testing was required following completion of the flow scan testing. Using the Significance Determination Process Phase 1 worksheet of IMC 0609.04, the inspectors determined the finding affected the Core Decay Heat Removal attribute of the Mitigation Systems Cornerstone. Because subsequent testing confirmed that no loss of operability or functionality existed the finding was determined to be of very low safety significance. The finding has a cross-cutting aspect in the area of Human Performance, Work Control, because the licensee performed work packages out of sequence, thereby allowing a safety system to be returned to service without the required post maintenance testing after completion of all work (H.3.(b)).

Inspection Report# : [2009005](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE CONTINUOUS MONITORING OF A FIRE DOOR

tection Program," for the licensee's failure to take adequate compensatory measures following the failure of electronic supervision of a fire door. Specifically, when continuous electronic supervision of a fire door in an area with gaseous fire suppression failed, the licensee did not establish an hourly fire watch as required by Procedure BwAP 1110-1, "Fire Protection Program System Requirements." The inspectors determined that the licensee failed to take procedurally required compensatory measures for the loss of electronic fire door monitoring. Upon notification of these requirements by the inspectors, the licensee restored power to the system and entered the issue into the CAP as Issue Report (IR) 945777.

The inspectors determined the finding is more than minor because it is associated with the external events (fire) attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding category was Fire Prevention and Administrative Controls and assigned a low degradation rating. Therefore, the finding screened as of very low safety significance. The cause of the finding is related to the work practices attribute of the cross-cutting element of Human Performance (H.4(b)). Specifically, procedures were in place that directed the appropriate compensatory measures for the loss of electronic monitoring of fire doors; however, the licensee did not implement those procedures.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF THE LICENSEE'S STAFF TO PROPERLY MANAGE ON-LINE RISK ASSOCIATED WITH TESTING OF THE 2A AUXILIARY FEEDWATER PUMP SLAVE RELAYS

The inspectors identified a NCV of 10 CFR Part 50.65 (a)(4), due to the licensee's failure to properly assess and manage the risk associated with scheduled slave relay testing for the 2A Auxiliary Feedwater (AF) system. Specifically, the licensee declared the system inoperable but available. However, the system at the time could neither automatically respond to an event, nor was an operator "dedicated" as defined in the NRC endorsed industry guidance, Nuclear Management and Resources Council (NUMARC) 93-01, to manually realign the system to perform its safety-related function for the system to be considered available. Corrective actions for this issue included assigning dedicated operators in accordance with NUMARC 93-01, Section 11. The inspectors did not identify a cross-cutting aspect for this issue. The finding is more than minor because there was elevated plant risk associated with the 2A AF pump being unavailable that would have required the implementation of additional risk management actions (i.e., assigning dedicated operators and/or maintenance personnel in accordance with NUMARC 93-01, Section 11). The inspectors assessed the safety significance of this finding using IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process." Using input from the licensee's risk assessment engineer, the inspectors determined that the actual risk deficit was 1.5×10^{-7} . The finding

was determined to be of very low safety significance because the actual risk deficit was determined to be less than 1×10^{-6} .

Inspection Report# : [2009004](#) (pdf)

Barrier Integrity

Significance:  Mar 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

PERFORMANCE OF TROUBLESHOOTING LEADS TO AUXILIARY BUILDING VENTILATION FAN FIRE

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

The finding was more than minor because it impacted the Systems, Structures, and Components and Barrier Performance attribute of the Barrier Integrity cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Because the finding only represented degradation, rather than loss, of the radiological barrier function provided for the auxiliary building it screened as an issue of very low safety significance (Green). This finding is associated with the cross-cutting area component of resources in the human performance cross-cutting area. Specifically, the work instructions for troubleshooting did not contain adequate guidance to adjust the oil bubbler without causing an adverse equipment impact (H.2(c)).

Inspection Report# : [2010002](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

FAILURE OF FIRE PROTECTION VALVE STROKE PROCEDURE RESULTS IN TRIP OF B TRAIN OF MAIN CONTROL ROOM VENTILATION

A NCV of 10 CFR 50, Appendix B, Criterion V, was self-revealed on September 22, 2009, when performance of a fire protection valve stroke procedure resulted in a trip of the B Train of the Main Control Room Ventilation System. Specifically, conflicting procedural guidance resulted in operators stroking the B Train Main Control Room Recirculation Charcoal Absorber deluge valve, which resulted in an unexpected trip of the safety-related B train of Main Control Room Ventilation and entry into Technical Specifications (TS) 3.7.10 and 3.7.11. The licensee conducted trainings and briefings to the operators to identify the potential error traps in procedures and entered this issue into the corrective action program (CAP) as IR 968717. The finding is more than minor because it affected the procedure quality attribute of the Barrier Integrity Cornerstone objective to maintain the radiological barrier functionality of the control room. The inspectors answered 'No' to all questions in the Containment Barrier Column of IMC 0604, Attachment 4, Table 4a, "Characterization Worksheet for IE, MS, and BI Cornerstones," and the finding screened as having very low safety significance. This finding is associated with the cross-cutting attribute of decision making in the Human Performance cross-cutting component (H.1(a)). Specifically, when faced with uncertainty in procedural direction during performance of the fire protection valve surveillance, the licensee did not use a systematic process for decision making, which resulted in a trip of the B Train of Main Control Room Ventilation.

Inspection Report# : [2009004](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : September 02, 2010