

Quad Cities 2

3Q/2010 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

PCIS RELAY COMMON NEUTRAL BROKEN

A self revealed finding of very low safety significance and a NCV of Technical Specification (TS) 5.4.1 was identified on April 8, 2010, when a Unit 2 Group III containment isolation signal was received during replacement of a primary containment isolation system (PCIS) relay as a result of a disconnected common neutral wire. Immediate corrective actions for this event included restoration of the reactor water cleanup system and rewiring for the PCIS relay to the proper configuration. The inspectors determined that the licensee's failure to identify and provide instructions to mitigate the common neutral during the work planning process was a performance deficiency. The inspectors determined that this finding was cross cutting in the area of Human Performance, Work Control, because the licensee failed to assess the impact of changes to the work scope during the maintenance activity when plant operating conditions had changed (H.3(b)).

The inspectors determined the finding was more than minor because the performance deficiency impacted the Mitigating Systems Cornerstone attribute of Configuration Control for Operating Equipment Lineup to ensure the availability, reliability and capability of safety systems to respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation. Using IMC 0609, Attachment 4, Table 4a, Mitigating Systems Cornerstone, all questions were answered "No," and this finding screened as Green, or having a very low safety significance.

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

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

MODE CHANGE WITHOUT REQUIRED RPS INSTRUMENT

A self revealed finding of very low safety significance and a NCV of TS 3.0.4 was identified on April 14, 2010, when operators changed operating modes from MODE 2 to MODE 1 without having all required channels of the reactor protection system (RPS) turbine condenser vacuum low scram function available prior to entering MODE 1. Immediate corrective actions for this event included restoration of the RPS channel. The inspectors determined that performing a MODE change from MODE 2 to MODE 1, without meeting the conditions of the limiting condition for operation (LCO) 3.0.4 or ensuring all required channels of the RPS turbine condenser vacuum low scram function were available prior to entering MODE 1, was a performance deficiency. The inspectors determined that this finding was cross cutting in the area of Problem Identification and Resolution Evaluation, because the licensee failed to properly classify, prioritize, and evaluate the RPS functional operability of the degraded condenser vacuum indication (P.1(c)).

The inspectors determined the finding was more than minor because the performance deficiency impacted the Mitigating Systems Cornerstone attribute of Configuration Control for Operating Equipment Lineup to ensure the availability, reliability, and capability of safety systems to respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP evaluation. Using IMC 0609, Attachment 4, Table 4a, Mitigating Systems Cornerstone, all questions were answered "No," and this finding screened as Green, or having a very low safety significance.

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

TEMPERATURE INDICATING PROBE FOUND BROKEN IN THE UNIT 2 DIESEL GENERATOR COOLANT SYSTEM

A finding of very low safety significance and an NCV of 10 CFR 50 Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was self-revealed for the installation of an inappropriate component into the Unit 2 emergency diesel generator coolant system. Specifically, the licensee failed to properly perform a part evaluation for a replacement temperature indicator (TI) designated as “augmented quality.” This resulted in the probe of the TI shearing off in the coolant flow stream and causing foreign material to enter the coolant system. Immediate corrective actions included the installation of an appropriately approved TI and recovery of foreign material from the system. The same part evaluation process was used for risk significant components independent of the system being worked. Therefore, this finding was more than minor because, if left uncorrected, this performance deficiency could lead to unplanned unavailability of safety-related or risk-significant equipment and would become a more significant safety concern. The inspectors performed a Phase 1 SDP screening and concluded that the issue was of very low safety significance (Green) because the failure of the TI did not result in unplanned inoperability or loss of function of the diesel generator. The inspectors determined that this finding did not have a cross-cutting aspect. This performance deficiency is not indicative of current licensee performance. The decision to install this type of TI was made in October 2007. The performance deficiency was identified and corrected through procedure and policy revisions in February 2008.

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

Barrier Integrity

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

LOSS OF POWER TO FREEZE SEAL MACHINE DURING OPDRV

A finding of very low safety significance and a NCV of 10 CFR Part 50.65(a)(4) was self revealed on March 25, 2010, when operators turned off the electrical power to one of the two electrical freeze seal machines being used to apply a reactor coolant system boundary freeze seal. Specifically, plant staff did not identify the interrelation between the mechanical freeze seal activity and the operations electrical power switching activity during risk assessment activities, and, therefore, did not manage the work activities to prevent loss of power to the freeze seal machines providing the credited boundary to prevent draining the reactor vessel. Immediate corrective actions included restoration of power to the machine and reestablishment of freeze seal temperature.

The finding was determined to be more than minor because required risk management actions were not implemented. These risk management actions were associated with the Barrier Integrity Cornerstone attribute of Configuration Control and affected the cornerstone objective of providing reasonable assurance that the reactor coolant system boundary protects the public from radionuclide releases caused by accidents of events. The inspectors used IMC 0609, “Significance Determination Process,” Appendix G, “Shutdown Operations Significance Determination Process,” Attachment 1, “Shutdown Operations Significance Determination Process: Phase 1 Operational Checklist for Both PWRs and BWRs,” and determined that since key safety functions were maintained, the issue screened as Green. The inspectors identified a cross cutting aspect associated with this finding in Human Performance Resources, Procedures (H.2(c)). Although the engineering documentation evaluating the risk in using the electric freeze seal machine recommended the power supplies be protected by operations, this information was not translated into the freeze seal procedure, MA AA 736 610, or the applicable work package.

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

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

DARLEY PUMP LEAKING GASOLINE FROM THE FUEL PUMP

A finding of very low safety significance was self-revealed for the failure to perform maintenance that would ensure the pump was in a standby condition and readily available to accomplish the requirements of QCOA 0010-16, "Flood Emergency Procedure." Although the staged portable pump would not have supported the external flooding emergency response procedure, no violation of regulatory requirements occurred. The inspectors did not identify a cross-cutting aspect associated with this finding because the issue is not reflective of current licensee performance. Immediate corrective actions included replacement of the degraded battery and overhaul of the pump's fuel pump. Other actions included identification of preventative maintenance tasks and a program owner of the pump and support equipment.

This issue was more than minor because it was associated with the Structures, Systems, and Component (SSC) Performance attribute of the Barrier Integrity Cornerstone objective of maintaining the functionality of spent fuel pool cooling. The finding affected the cornerstone objective of providing assurance that physical design barriers protect the public from radionuclide releases caused by events including external flooding. Specifically, the pump could fail due to maintenance preventable component failure resulting in inadequate or degraded makeup to the spent fuel pool during an external flooding event. The inspectors determined 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," Tables 4a and 4b. The inspectors determined that even though this equipment is assumed to completely fail, the licensee could provide an alternate portable pump already located on site and capable of performing the safety function during this slow developing event. Since alternate equipment was available and the delay in mobilizing the alternate equipment would not have resulted in loss of capability to mitigate the impact of the flooding event, the issue is of very low safety significance or Green.

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

Emergency Preparedness

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

INCORRECT WIND DIRECTION ON NARS FORM

A NRC-identified finding of very low safety significance and associated NCV of 10 CFR 50.47(b)(9) was identified for delayed corrective action without appropriate compensatory actions for a defective computer point that sends wind direction data to the plant parameter display system (PPDS). This defective computer point resulted in incorrect wind direction on a Nuclear Accident Reporting System (NARS) form transmitted to the State of Illinois as part of the declaration of an Unusual Event on May 19, 2010. Corrective actions included the restoration of the computer point for PPDS. Inspectors identified this performance deficiency had a cross cutting aspect in Problem Identification and Reporting Evaluation because although the non functional computer point, R234, was identified in December 2009, the licensee failed to thoroughly evaluate, classify, and prioritize the condition of bad data from a computer point and assess how the condition affected PPDS (P.1(c)).

This finding is more than minor because the performance deficiency matches an example of a Green finding from IMC 0609, Appendix B, Section 4.9, page B 20, "Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY without compensatory measures, or corrective actions are inadequate or delayed." Using IMC 0609, Appendix B, Sheet 1, "Failure to Comply Flowchart," the performance deficiency screened as very low safety significance, or Green.

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

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 : November 29, 2010