

Quad Cities 2

1Q/2014 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: FIN Finding

STEAM DRYER/STEAM SEPARATOR LIFTING DEVICE FAILURE TO MEET AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) N14.6

The inspectors identified a finding of very low safety significance (Green) involving the licensee's failure to demonstrate compliance with American National Standards Institute (ANSI) N14.6-1978, Section 3.2.1.1. Specifically, the licensee did not establish the design stress factors based on the fracture toughness characteristics of the socket pins, lock pins, and hook pins for the steam dryer/steam separator lifting device. This issue was entered into the licensee's corrective action program (CAP) as Action Request (AR) 1517114, "Dryer/Separator Strongback Calculation Discrepancies," dated May 23, 2013, and AR 1578475, "Dryer/Separator Strongback Pin Inspection Criteria," dated October 30, 2013.

The inspectors determined the finding to be more than minor because the finding was associated with the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, compliance with ANSI N14.6-1978, Section 3.2.1.1 is to ensure safe load handling of heavy loads over the reactor core, spent fuel, and/or safety-related systems through establishing the design based on the fracture toughness characteristics of the material. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I -- Initial Screening and Characterization of Findings," Table 3. Since the finding was associated with shutdown conditions, the inspectors used IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The inspectors determined that none of the conditions constituting a loss of control were met as described in Appendix G, Attachment 1, "Phase I Operational Checklists for Both PWRS and BWRS," for this finding and no Phase II or Phase III analysis was required. Specifically, the licensee provided information to inspectors that prior nondestructive examinations and inspections of the lifting device found no prior material defects. In addition, the licensee had not experienced any load drop events since placing the steam dryer/steam separator lifting device into service. The lifting device was also load tested successfully in accordance with the applicable requirements of ANSI N14.6. Therefore, the inspectors determined that this finding was of very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the concern was related to a design calculation from 2005, and thus was not necessarily indicative of current licensee performance.

No violation of regulatory requirements is associated with this finding based on the steam dryer/steam separator lifting device being a non-safety-related structural component.

Inspection Report# : [2014002](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

WRONG PARTS INSTALLED FOR CRD HCU

A finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was self-revealed through repetitive low pressure alarms on a recently overhauled control rod drive (CRD) hydraulic control unit (HCU) accumulator. Specifically, the work instructions for overhaul of the HCU for CRD 2-0305-34-59 were not appropriate to the circumstances in that the wrong part number for the bottom O-ring was listed and as a result, the wrong sized O-ring was installed in the safety related application. The wrong O-ring allowed nitrogen pressure to leak out of the HCU accumulator after the HCU was returned to service. After the part discrepancy was identified, the licensee stopped all work on the HCU until the parts list was corrected and the procedure was updated to add the catalogue identification number for each part to the applicable steps. The HCU overhaul was completed and retested satisfactorily. An extent of condition review was performed to identify and evaluate other potential instances where the parts list may have been used. The inspectors determined that the development and implementation of an informal parts list was a significant contributor to the performance deficiency and identified that this issue had a cross-cutting aspect in the area of Human Performance – Work Control in that the licensee did not plan the activity with sufficient rigor to support long-term equipment reliability without reliance on manual actions (H.3(b)).

This performance deficiency was determined to be more than minor because it adversely affected the Mitigating Systems Cornerstone objective to ensure availability, reliability, and capability of mitigating systems for the Equipment Performance attribute because frequent manual operator actions were required to be taken to maintain reliability of the affected accumulator. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with IMC 0609, Appendix A, "The Significance Determination Process (SDP) For Findings At-Power." The inspectors answered "No" to all questions of Exhibit 2, "Mitigating Systems Screening Questions," Section C – "Reactivity Control Systems," and therefore, the finding screened as Green or very low safety significance.

Inspection Report# : [2013004](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

CALCULATION ASSUMPTIONS NOT TRANSLATED IN TO OPERATING PROCEDURES

A finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to translate design requirements into procedures to ensure availability of the ultimate heat sink (UHS) in a loss of lock event. Specifically, the licensee failed to translate the need to minimize diesel generator cooling water (DGCW) flow as assumed in the design calculation into station operating procedures. In response to the inspectors' concerns, the licensee initiated actions to verify the required flow of the DGCW system and assessed operability. Because the existing river temperature was significantly lower than 95°F (the assumed initial temperature), the licensee concluded the UHS was capable of performing its function. This violation was entered into the licensee's corrective action program as issue report 1416634.

The inspectors determined the performance deficiency was more than minor because operating procedures did not require throttling of the DGCW flow or guidance if an emergency diesel generator was operating following a lock failure resulting from a barge colliding into the lock structure. The lack of guidance resulted in an increased heat load and resulted in reasonable doubt the UHS would remain below 108°F. The inspectors evaluated the finding using IMC 0609, Exhibit 4, "External Events Screening Questions," and answered "no" to all of the applicable questions. Subsequent calculations by the licensee indicated the maximum flow would not challenge the maximum design temperature limits for the UHS. Therefore, the finding screened as of very low safety significance (Green). The inspectors determined the cause of this finding did not represent current licensee performance and, thus, no cross-cutting aspect was assigned.

Inspection Report# : [2013003](#) (pdf)

Significance: G May 17, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Translate Design Basis Into Toxic Chemical Response Procedures

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors for the licensee’s failure to translate the design basis correctly into procedures and instructions for the operators. Specifically, the licensee did not update procedures and instructions to ensure that operators would don respirators within two minutes of detection of a toxic chemical, ammonia, as determined in a calculation. The licensee entered the issue into their corrective action program and planned to revise the calculation using detection of odor as an entry condition for donning of respirator protection and update the operating procedures accordingly.

The finding was determined to be more than minor because the failure to provide procedures or instructions to operators to don respirators could result in the operators becoming incapacitated and not being able to respond to an accident or event that had a possibility of radionuclide releases. The finding was determined to be of very low safety significance (Green) due to the low probability of an ammonia release associated with a barge accident. The finding had a cross-cutting aspect in the area of human performance, work control, because the licensee’s engineering organization did not coordinate with the operations organization on the need to don respirators within two minutes of detection of ammonia gas following a postulated toxic chemical accident.

Inspection Report# : [2013007](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

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

information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A 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# : [2012012](#) (*pdf*)

Inspection Report# : [2013201](#) (*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# : [2013201](#) (*pdf*)

Last modified : May 30, 2014