Oyster Creek
1Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Emergency service water non-conformance not entered identified as a condition adverse to quality and not entered into corrective action program
The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," when Exelon did not promptly identify or correct a condition adverse to quality. The inspectors determined that failing to identify and enter a condition adverse to quality into the corrective action program is a performance deficiency that was within Exelon's ability to foresee and correct. Exelon entered this issue into the corrective action program for resolution as IR1481670. This finding is more than minor because it is associated with the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective of "ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences." This issue was also similar to Example 3j of NRC IMC 0612, Appendix E, "Examples of Minor Issues," because the condition resulted in reasonable doubt of the operability of emergency service water system 2 and additional analysis was necessary to verify operability. The inspectors evaluated the finding using exhibit 2, "Mitigating System Screening Questions" in appendix A to inspection manual chapter 0609, "Significance Determination Process." The inspectors determined that this finding was a deficiency affecting the design or qualification of a mitigating SSC, where the SSC maintained its operability or functionality. Therefore, inspectors determined the finding to be of very low safety significance
This finding has a cross-cutting aspect in the area of Problem Identification and
Resolution, Corrective Action Program, because Exelon did not identify the issue associated with the non-conforming emergency service water expansion joint in a timely manner [P.1(a)]. (1R15)

Inspection Report# : 2013002 *(pdf)*

Significance: G Dec 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Inspection and Torquing of Bolted Connection Procedure
The inspectors identified a Green, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because Exelon did not properly implement procedural controls to ensure adequate thread engagement for standby liquid control (SLC) squib valve flanges. Specifically, SLC squib valve flanges were installed with inadequate thread engagement (stud was not flush with the nut), as required by Exelon's maintenance procedures. Exelon's corrective actions included declaring the system inoperable, entering the issue into the corrective action program (IR 1444861 and 1444862) and immediately replacing the existing bolts with bolts of an appropriate length such that projection through the nut was at least flush.

The performance deficiency was more than minor because if left uncorrected the inadequate thread engagement would have the potential to lead to a more significant safety concern. Specifically, Exelon's evaluation stated that the SLC squib valve spool piece flanges would not have been able to perform their design function under all seismic conditions when the system was required to be operable. In consultation with the Region I senior reactor analyst, the inspectors reviewed this condition using IMC 0609, Attachment G, "Shutdown Operations Significance Determination Process." As the condition occurred during the refueling outage and was identified and corrected before Exelon started up the Oyster Creek reactor, and only existed during the outage when SLC was not required to be operable (November 16 – 27, 2012), the issue screened to very low safety significance (Green). This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program because Exelon did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, Exelon did not take appropriate corrective actions, such as replacing bolts during the refueling outage with longer bolts, after the NRC identified a similar concern on the same SLC squib valve spool flanges in September 2012 (IR 1417726). (P.1(d)) (Section 1R15)

Inspection Report# : 2012005 *(pdf)*

Significance: G Aug 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate the impact of Increased Emergency Diesel Generators Loading on the Volume of Available Fuel Oil
The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for Exelon's failure to promptly identify and correct a condition adverse to quality. Specifically, Exelon did not promptly identify and correct the impact of increased emergency diesel generator (EDG) loading on the committed three day fuel oil supply. Existing procedural guidance requires load management actions after 8 hours which provides reasonable assurance of EDG operability. Exelon corrective actions include additional load management actions to ensure fuel oil capacity is maintained. This condition has been placed in the Exelon's corrective action program.

Exelon's failure to promptly identify and correct an inadequate technical evaluation that did not determine the impact of increased EDG loading on the existing three day fuel oil supply was a performance deficiency. Inspectors determined that the finding was more than minor because the performance deficiency was associated with the design control attribute of the Mitigating Systems Cornerstone and the associated cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the technical evaluation stated that #2 EDG loading could be as much as 2735 KW which translates to approximately 65 hours of fuel capacity with the storage tank at minimum capacity versus the required 72 hours. The EDGs remain operable because they are capable of supplying accident loads with adequate load management actions after eight hours of operation. The inspectors evaluated the finding using IMC 0609, Appendix A, "the Significance Determination Process for Findings for At-Power," and determined that it was of very low safety significance (Green). The finding is not a deficiency affecting the design or qualification of a mitigating structure, system or component (SSC) and the SSC maintains its operability. The finding had a cross-cutting aspect in the area of problem identification and resolution, because Exelon did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. Specifically, Exelon's technical evaluations 1145338 and 1365452 failed to adequately evaluate the impact of increased loads on the amount of available EDG fuel oil. Therefore, at the increased loads of 2735 KW, the EDG's would have only had 65 hours of the required 72 hours of fuel oil capacity. [P.1 (c)] [Section 4OA2.1.c.]

Inspection Report# : 2012008 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Entry into a non-conservative technical specification with both isolation condensers inoperable during power operation
The inspectors identified a Green NCV of Technical Specification 3.8, "Isolation Condenser", specification D, when Exelon did not enter the correct technical specification and take the required actions when both isolation condensers were made inoperable in order to perform corrective maintenance. Specifically, Exelon incorrectly entered general Technical Specification 3.0.A for conditions in excess of those addressed in the technical specifications instead of the more specific technical specification (3.8.D) for when both isolation condensers are inoperable. Entry into the appropriate technical specification would have required the initiation of an immediate shutdown instead of allowing 30 hours to reach cold shutdown. Exelon entered this issue into their corrective action program as IR 1386020 to track resolution of this issue.

The inspectors determined that not entering the correct technical specification and invoking the associated action requirement was a performance deficiency that was reasonably within Exelon's ability to foresee and correct, and should have been prevented. This finding is more than minor because it is similar to example 2.a in IMC 0612, Appendix E. Specifically, by not entering TS 3.8.D, Exelon did not meet the technical specification requirement to start shutting down the plant immediately when both isolation condensers were made inoperable. Additionally, this finding also affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined this finding was not a design qualification deficiency resulting in a loss of functionality or operability, did not represent an actual loss of safety function of a system or train of equipment, and was not potentially risk-significant due to a seismic, fire, flooding, or severe weather initiating event. Therefore, inspectors determined the finding to be of very low safety significance (Green).

This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon's training of personnel not sufficient to preclude entry into a non-conservative technical specification. [H.2(b)] (Section 1R15)

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: FIN Finding
APRM 7 Finding
The inspectors identified a Green finding when Exelon did not perform an adequate operability determination of Average Power Range Monitor (APRM) 7 prior to restoring it to operation on March 24, 2012, after it was declared inoperable on February 2, 2012. Specifically, Exelon declared APRM 7 operable on March 24, 2102 without a documented technical basis or successful completion of a surveillance test to demonstrate operability, and operated APRM 7 through April 3, 2012, when it failed in the same manner and was again declared inoperable. Exelon entered this issue into their corrective action program as IR XXTBDXX to track resolution of this issue.

The inspectors determined that the failure to perform an operability evaluation to demonstrate that APRM-7 was operable as directed by OP-AA-108-115, “Operability Determinations”, is a performance deficiency that was within Exelon’s ability to foresee and correct. The inspectors determined this finding was more than minor because if left uncorrected it could become a more significant safety concern. Specifically, degraded technical specification required and safety related equipment require a full operability screening to ensure Exelon identifies and characterizes the

equipment performance issues, develops all needed compensatory measures and does not restore inoperable equipment to operable status. The inspectors determined the finding to be of very low safety significance (Green) because it affected the initiating events cornerstone and does not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions will not be available.

This finding has a cross cutting aspect in the area of Human Performance, Decision Making, where the licensee makes 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)]. (Section 1R15)

Inspection Report# : 2012003 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Application of Strippable Coating to the Refueling Cavity Liner and the Failure to Configure a Valve in the Leakage Collection System Resulting in Increased Potential for Corrosion
Green. A self-revealing NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified because Exelon procedures and work orders were not effective in preventing refueling cavity leakage from overflowing onto the exterior surface of the drywell liner during the refueling outage (1R24) in November 2012. The performance deficiencies that contributed to the finding were inadequate oversight of the contractors applying a strippable coating to the reactor cavity liner and a valve configuration control error on a temporarily installed leakage collection system. Upon discovery, Exelon took immediate corrective actions to open the leakage collection system filter inlet valve and restore reactor cavity liner leakage flow to the reactor building equipment drain tank.

This finding is more than minor because, if left uncorrected, this condition would have the potential to lead to a more significant safety concern. Specifically, the continued wetting of the metallic drywell liner surface could provide an environment conducive to corrosion. This finding is not more than very low safety significance because the licensee performs periodic inspections of drywell liner and exterior surface coating to ensure that liner corrosion is monitored and controlled. The inspector completed the Phase 1 Initial Screening and Characterization of Findings, of Attachment 0609.04 of Inspection Manual Chapter (IMC) 0609, and screened the finding to Green, very low safety significance. This finding is not more than very low safety significance because the licensee performs periodic inspections of the drywell liner and exterior surface coating to ensure that liner corrosion is monitored and controlled. Exelon has entered this condition into the corrective action process under IR 1440116. This finding has a cross cutting aspect in the area of Human Performance, Work Practices, H.4(c) for not ensuring supervisory and management oversight of work activities, including contractors and plant personnel, such that nuclear safety is supported regarding the application of the strippable coating on the reactor cavity liner. (H.4(c)) (Section 1R08)

Inspection Report# : 2012005 *(pdf)*

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

Last modified : June 04, 2013