Limerick 1
4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: FIN Finding
Failure to Identify Incorrectly Adjusted Control Power Relay Resulting in Unit 1 Manual Scram
A self-revealing Green finding was identified for the failure to identify that the latching mechanism on a bus 114A/124A control power auxiliary relay (27X) was incorrectly adjusted during prior post-maintenance testing activities. Specifically, proper post-maintenance testing activities in 1992 and 2004 should have identified that the latching mechanism was incorrectly adjusted. The incorrectly adjusted latching mechanism prevented the automatic swap of control power to the alternate source (bus 124A) when preferred power (bus 114A) was lost due to an electrical fault. This resulted in a loss of stator water cooling runback signal that would have caused the trip of both recirculation motor-generator sets and resulted in operators having to manually initiate a reactor scram. Exelon's corrective actions taken or planned included verifying the latching mechanism adjustment on the site's other similarly designed control power auxiliary relays, testing the automatic undervoltage transfer circuit on a periodic basis, and performing a failure analysis on the faulted underground supply cable which initiated the event.

The finding was more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and affected the 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 finding was determined to have very low safety significance (Green) in accordance with NRC IMC 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or function would not be available. Because the opportunities to identify the incorrectly adjusted latching relay occurred in 1992 and 2004, the inspectors determined that this finding was not reflective of current licensee performance, and, therefore, did not have a cross-cutting aspect. Enforcement action does not apply because the performance deficiency did not involve a violation of regulatory requirements

Inspection Report# : 2010004 *(pdf)*

Mitigating Systems

Significance: SL-IV Dec 23, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Update the UFSAR Consistent with Plant Conditions as Required
The inspectors identified a Severity Level lV (SLIV) NCV of 10 CFR Part 50.71(e) in that Exelon failed on multiple occasions to revise the Updated Final Safety Analysis Report (UFSAR) with information consistent with plant conditions. Specifically, Exelon personnel failed to incorporate four previously identified UFSAR inconsistencies into the September 2010 UFSAR update as required.

The inspectors determined that the failure to update the UFSAR in accordance with 10 CFR 50.71(e) was a performance deficiency that was reasonably within Exelon's ability to foresee and correct, and should have been prevented. Because the issue had the potential to affect the NRC's ability to perform its regulatory function, the inspectors evaluated this performance deficiency in accordance with the traditional enforcement process. Using example 6.1.d.3 from the NRC Enforcement Policy, the inspectors determined that the violation was a SLIV (more than minor concern that resulted in no or relatively inappreciable potential safety or security consequence) violation, because the information that was not updated in the UFSAR was not

used to make an unacceptable change in the facility nor did it impact a licensing or safety decision by the NRC.

In accordance with inspection manual chapter 0612, appendix B, this issue was not assigned a cross-cutting aspect.
Inspection Report# : 2010007 *(pdf)*

Significance: G Dec 23, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Three of Four RHR Unit Coolers Unreliable due to Various Planned and Unptanned Gonditions (Silting).
The inspectors identified a violation of 10 CFR 50, Appendix B, Criterion XVl, "Corrective Action," in that Exelon failed to correct a condition adverse to quality for a safetyrelated support system that was essential to successful mitigating system operation.

The inspectors determined that the failure to correct a condition adverse to quality in accordance with 10 CFR 50 Appendix B, Criterion XVl, during the timeframe of June 1, 2008 to September 14,2008, contributed to the unreliability of the 1C-V210 unit cooler and was a performance deficiency. Specifically, Exelon did not initiate bi-weekly flushing per RT-6-011-603-0 of the 1C-V210 unit cooler to minimize the effects of silt build up. This finding is more than minor because it affected the equipment performance attribute of the Mitigating System cornerstone and the associated cornerstone objective of ensuring the reliability and availability of systems that respond to initiating events to prevent undesirable consequences, This issue was also similar to example 3.j. in NRC IMC 0612, Appendix E, "Examples of Minor lssues," in that it resulted in a condition where there was a reasonable doubt on the operability of the 1C-V210 unit cooler. The inspectors assessed this finding in accordance with IMC 0609, Attachment 4, Phase 1, "lnitial Screening and Characterization of Findings," and determined that it was of very low safety significance (Green) since it was determined that the error did not result in a loss of the system's safety function.

The inspectors determined that this violation had a cross-cutting aspect in the area of Problem ldentification and Resolution, Corrective Action Program, in that Exelon did not take appropriate corrective actions to address a condition adverse to quality in a timely manner, commensurate with its safety significance and complexity. Specifically, Exelon failed to take appropriate actions to initiate bi-weekly flushes of the 1C-V210 unit cooler, upon discovery of conditions conducive to silt buildup during June through September 2008. [P.1 (d)]
Inspection Report# : 2010007 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Compensatory Action for Inoperable Fire Door
The inspectors identified a Green NCV of Limerick Generating Station operating License Condition 2.C.3, in that Exelon failed to take compensatory actions for an inoperable fire door. Specifically, on two occasions a required fire door was found in a condition where the latching mechanism did not function. Although issue reports (IRs) were written which identified this door to be a Technical Requirements Manual (TRM) fire door, actions were not taken to station the required hourly fire watch. Corrective actions included setting the required hourly fire watches, distributing guidance to all senior licensed operators, and implementing procedural changes to clarify the requirements of fire doors for future operability determinations.

The finding was more than minor because it was associated with the protection against external events (fire) 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 found to be of very low safety significance (Green) based upon a Phase 2 SDP screening. The inspectors determined that this finding did not have a cross-cutting because the incorrect operability decisions were based on a 1999 engineering evaluation and, therefore, was not reflective of current licensee performance.

Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate PM on EDGs
The inspectors identified a Green NCV of Limerick Unit 2 Technical Specification (TS) 6.8.1, "Procedures and Programs," in that Exelon did not provide an adequate procedure for preventive maintenance (PM) of the Limerick Emergency Diesel Generator (EDG) lube oil (LO) filter bypass valves. As a result, Exelon did not identify that the EDG D23 LO filter bypass valves were degraded and allowed oil to bypass the filter during engine operation. This condition, combined with historical foreign material in the LO system, led to the failure of the EDG D23 number 5 upper piston assembly during a 24-hour endurance test run on May 5, 2010. Corrective actions implemented included repairing the damage to D23, performing a flush of the D23 LO system, revising the applicable PM procedure to include specific instructions for inspecting the LO filter bypass valves, and revising performance monitoring guidance to ensure spuriously lifting LO filter bypass valves would be identified in the future.

The finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating System cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) in accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," using SDP Phases 1, 2, and 3. This finding has a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not provide complete, accurate and up-to-date design documentation, procedures, and work packages [H.2 (c)]. Specifically, Exelon did not provide site engineers with complete and accurate resources to ensure performance centered maintenance (PCM) template revisions were thoroughly reviewed and implemented.

Inspection Report# : 2010004 *(pdf)*

Barrier Integrity

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 : March 03, 2011