Limerick 2
2Q/2006 Plant Inspection Findings

Initiating Events

Significance: G Mar 12, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Unit 2 Core Alterations Without Audible Source Range Monitor Alarms
A self-revealing NCV was identified for the licensee's failure to comply with Technical Specification (TS) 3.9.2, "Instrumentation." Plant operations staff inappropriately started core alterations after the loss of all Unit 2 source range monitor audible alarms. Core alterations were stopped when Exelon management was informed of the problem. The source range monitor audible alarm was fixed prior to moving fuel in the reactor and this issue was entered into Exelon's corrective action program.

This finding is greater than minor because it affected the Initiating Events cornerstone objective of limiting the likelihood of those events that challenge critical safety functions during shutdown conditions. This finding is of very low safety significance because it did not increase the likelihood of a loss of reactor coolant system inventory, it did not degrade the ability to terminate a leak or add inventory to the reactor coolant system, and it did not degrade the ability to recover decay heat removal capability if lost.
Inspection Report# : 2006002*(pdf)*

Mitigating Systems

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," because Exelon's actions to correct a Residual Heat Removal (RHR) system procedure deficiency, i
The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement effective corrective actions to correct a residual heat removal (RHR) system procedure deficiency. Specifically, a procedure change, implemented following a March 2003 high pressure condition, was ineffective in eliminating the potential for a high pressure condition (water hammer) in the RHR system, when placing the system inservice for alternate decay heat removal in May 2006. The licensee entered this deficiency into their corrective action program for resolution.

This finding is greater than minor because if left uncorrected, it would become a more significant safety concern. The finding was determined to be of very low safety significance in accordance with the shutdown SDP, because it did not increase the likelihood of a loss of reactor coolant system (RCS) inventory, it did not result in an inadvertent change in RCS temperature due to a loss of RHR, it did not result in an inadvertent RCS pressurization, and it did not degrade the ability to recover decay heat removal capability if lost.

Inspection Report# : 2006006*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to scope emergency service water back-up supply to turbine enclosure cooling water into the Maintenance Rule program
The inspectors identified a non-cited violation of 10 CFR 50.65(b)(2)(i) because Exelon did not scope an emergency service water (ESW) valve open function, used in the emergency operating procedures, into its maintenance rule (MR) monitoring program. Exelon did not demonstrate that the valve's performance was effectively controlled through the conduct of appropriate preventative maintenance such that the valve remained capable of performing its intended function. As a result, Exelon did not perform additional corrective actions to determine the cause and correct the condition when the valve failed to open on demand during the last two valve tests in 2002 and 2004. Exelon added the ESW valve open function into the MR program and entered this deficiency into their corrective action program for resolution (IRs 370575 and 370904).

This finding affects the Mitigating Systems Cornerstone because equipment performance problems were such that Exelon could not demonstrate effective control of component performance or condition through preventative maintenance. This finding is more than minor because it is similar to Example 7.d of NRC Inspection Manual Chapter (IMC) 0612 Appendix-E, "Examples of Minor Issues." The finding is of very low safety significance because it did not represent an actual loss of safety function for equipment designated as risk significant, and was not risk significant for external initiating events. (Section 1R12)

Inspection Report# : 2005004*(pdf)*

Barrier Integrity

Significance: G Jun 27, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Annual Operating Test Administered at Limerick
The inspectors identified a Green non-cited violation (NCV) of 10CFR55.59 (a)(2)(ii) for an inadequate annual operating test that was administered at Limerick. Exelon procedures and commitments made by the licensee in 1991 require questions on job performance measures (JPMs) to explore the differences, if any, in task performance between Limerick and Peach Bottom. At least three of the five JPMs had significant differences in the way the task is performed at Limerick versus the same task at Peach Bottom. These three JPMs should have had questions to explore these differences, but did not. Exelon has entered this issue into their corrective action program for resolution.

The inspectors determined that the inadequate annual operating test administered at Limerick was more than minor because it was associated with the human performance attribute and affected the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radio nuclide releases caused by accidents or events. The finding is of very low safety significance (Green) because the inadequate annual operating test did not have an adverse impact on operator actions such that safety related equipment was made inoperable during normal operations or in response to a plant transient.
Inspection Report# : 2006003*(pdf)*

Emergency Preparedness

Significance: G Nov 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Emergency Response Organization Exercise Performance Issue
The inspectors identified that the Exelon exercise evaluators failed to identify an ERO exercise performance issue that had the apparent effect of unnecessarily prolonging a simulated radiological release to the environment. Specifically, the exercise scenario presented conditions of fuel damage and the failure of one MSIV to close. Operators inappropriately opted to de-pressurize the reactor using the main condenser bypass valves rather than the SRVs. This created a pathway that allowed radiation from the failed fuel to be released to the environment.
Inspection Report# : 2005009*(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jun 23, 2006
Identified By: NRC

Item Type: FIN Finding

Identification and Resolution of Problems

The team identified that Exelon was effectively implementing the corrective action program at the Limerick Generating Station. Exelon staff was routinely effective at identifying discrepant conditions at an appropriate threshold and entering them into the corrective action program. Identified issues were typically prioritized appropriately and were properly evaluated commensurate with the potential safety significance. The evaluations of issues identified the causes of the problem, the extent-of-condition, and provided for corrective actions appropriate to address the causes. Corrective actions were routinely implemented in a timely manner. The majority of the corrective actions reviewed were fully effective. Audits and self-assessments identified adverse conditions and negative trends, and were generally self-critical and consistent with the team's findings. Operating experience usage was also found to be effective. The team identified a few minor examples where the problem identification and corrective action aspects of the corrective action program were not fully effective. The team also identified one greater than minor example where corrective actions were ineffective regarding a residual heat exchanger procedure revision. Exelon took prompt actions to address the issues identified by the team.
Inspection Report# : 2006006*(pdf)*

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