Limerick 2
3Q/2009 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Test 480 Volt Motor Control Unit Circuit Breakers
The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for failure to establish a test program for all safety-related 480 volt motor control unit (MCU) circuit breakers to assure that necessary testing was performed to demonstrate that they would perform the safety-related function in service. Specifically, in 2004, Exelon inappropriately classified certain safety related 480 volt molded-case circuit breakers as run-to-failure in the Performance Centered Maintenance (PCM) process, which resulted in the breakers receiving no planned preventive maintenance or testing. Exelon entered this issue into the Corrective Action Program (CAP) for resolution as Issue Report (IR) 948232. Exelon's corrective actions included: reclassifying all safety-related 480 volt MCUs as either "critical" or "non-critical," a formal review of the vendor's technical bulletin for applicability; and an extent of condition review of all direct current MCUs and 4 kilovolt circuit breakers. Also, preventive maintenance and testing was planned for all in-service 480 volt MCUs that had gone overdue because they were inappropriately classified as "run-to-failure."

This finding is more than minor because, if left uncorrected, the performance deficiency would lead to a more significant safety concern. Specifically, the installed molded case circuit breakers classified as run-to-failure had received no periodic planned maintenance or tests and were beyond the manufacturer's design life. Based on operating experience, this would result in a breaker being slow to trip or sticking in the "on" position after an over-current condition. The inspectors assessed the finding using Phase 1 of IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings" and determined the finding to be of very low safety significance because the issue was a qualification deficiency confirmed not to result in loss of operability per "Part 9900, Technical Guidance, Operability Determination Process for Operability and Functional Assessment." Since the change to the PCM process was made in 2004, the inspectors determined that this finding was not reflective of current licensee performance and, therefore, did not have a cross cutting aspect.

Inspection Report# : 2009004 *(pdf)*

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct 480V Breaker Thermography
The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failing to correct a condition adverse to quality associated with the performance of thermography on safety-related breakers. Specifically, although Exelon identified that the failure to perform thermography on breakers in a loaded condition was a causal factor for an electrical fault that occurred in January 2009, Exelon did not implement proper corrective actions to ensure that applicable future thermography examinations would be conducted while the equipment was in a loaded condition. Exelon entered this issue into the CAP as IR 874599, Assignment 58. Corrective actions included adding 48 breakers to the list of breakers that will be loaded prior to thermography and creating an assignment to formally assess the remaining breakers that may not receive routine thermography due to not being in a loaded condition.

The finding was more than minor because it was associated with the equipment performance 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. The inspectors assessed the finding using Phase 1 of IMC 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings” and determined the finding to be of very low safety significance because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. 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 a safety issue [P.1(d)]. Specifically, although the failure to perform thermography on breakers in loaded conditions was identified as a causal factor for an electrical fault, actions were not taken in a timely manner to ensure loaded conditions for applicable future thermography examinations

Inspection Report# : 2009004 *(pdf)*

Significance: G Jun 17, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Adequately Assess Erratic Time Delay Relay Operation on Unit 2 HPCI Operability
The inspectors identified a Green finding associated with the failure to adequately assess erratic time delay relay operation on Unit 2 High Pressure Coolant Injection (HPCI) system operability in a timely manner commensurate with the potential safety significance. Following a failed surveillance test, the Unit 2 HPCI system was considered operable despite having no “as-left” data for a system time delay relay, because of erratic operation, and failing to adequately address the relay’s design basis function. This finding is more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors assessed the finding using Phase 1 of IMC 0609, Appendix A, “Significance Determination Process for Reactor Inspection Findings for At-Power Situations” and determined the finding to be of very low safety significance (Green) because it did not represent a loss of safety function of a single train. This finding has a crosscutting aspect in Human Performance, Decision-Making, because Exelon did not make a safety-significant decision using a systematic process, especially when faced with uncertain or unexpected plant conditions, to ensure safety is maintained [H.1(a)]. This included not obtaining timely interdisciplinary input and review on the safety significant decision (H.1(a)).

Inspection Report# : 2009003 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Obtain License Amendment for TS Bases Change
The inspectors identified a Severity Level IV NCV of 10 CFR 50.59, “Changes, Test, and Experiment,” for failing to obtain a Technical Specification (TS) license amendment for a change made to the TS Bases concerning offsite power source operability. Changes made to TS Bases 3/4.8.1 required a change in the TS, because the change caused the bases to be in direct conflict with the requirements of TS Limiting Condition for Operation 3.8.1, “AC Sources Operating,” through the application of associated TS surveillance requirements. Exelon entered this issue into the CAP and issued night orders to operators which required declaring an offsite power supply inoperable when an offsite power supply feeder breaker became unavailable to an emergency bus.

Because this was a violation of 10 CFR 50.59, it was considered to be a violation which potentially impedes or impacts the regulatory process. Therefore, such violations are characterized using the traditional enforcement process. In this case, the licensee failed to perform an adequate safety evaluation in accordance with 10 CFR 50.59 because the approved change to the technical specification basis was in conflict with the TS surveillance requirements. This change required prior approval from the NRC before its implementation. Comparing this item to the examples in NUREG 1600, Supplement I, ”Reactor Operations,” this finding is more than minor because NRC approval would have been required. The inspectors completed a Significance Determination Review using NRC IMC 0609,

Attachment 4, Phase 1 – Initial Screening and Characterization of Findings. Using the Phase I Screening worksheet the finding was determined to be of very low safety significance (Green) since the finding did not represent an actual loss of safety function for greater than the TS allowed outage time. Comparing this item to the examples in NUREG 1600, Supplement I, this finding is similar to Item D.5, "Violations of 10 CFR 50.59 that result in conditions evaluated as having very low safety significance (i.e., Green) by the SDP." This is an example of a Severity Level IV violation. Since the TS Bases change was made in 2000, the inspectors determined that this finding was not reflective of current licensee performance and, therefore, did not have a cross-cutting aspect.

Inspection Report# : 2009002 *(pdf)*

Significance:  Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Post Maintenance Test following Containment Isolation System Relay Replacement
The inspectors identified a NCV of Technical Specification 6.8.1, "Administrative Controls-Procedures", because Exelon did not maintain adequate maintenance procedures associated with work performed on the Unit 2 Nuclear Steam Supply Shutoff System (NSSSS). Specifically, the procedures, which performed system relay replacements, did not contain adequate post maintenance testing to demonstrate that the Technical Specification required response times of all circuits affected by the maintenance were satisfied.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Mitigating System cornerstone, and affected the Mitigating System cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. As a result, additional unavailability and engineering evaluation was required to demonstrate satisfactory response times. The finding was determined to be of very low safety significance (Green) because it did not represent a loss of safety function. The inspectors determined this finding has a cross-cutting aspect in Human Performance, Resources, because Exelon did not provide complete and accurate work packages to assure nuclear safety. Specifically, the NSSSS was returned to service without all the required post maintenance testing being performed to demonstrate operability. (IMC 0305 aspect: H.2(c) (Section 1R19).
Inspection Report# : 2008005 *(pdf)*

Barrier Integrity

Significance:  Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Design Control for Reactor Building Temperatures
The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the failure to translate minimum room temperatures assumed in an isolation actuation instrumentation setpoint calculation into Unit 1 and 2 procedures such that reactor building room temperatures were maintained above the minimum assumed. As a result, the reactor enclosure and refueling area ventilation systems were not operated to assure that room temperatures were maintained above the minimum assumed in design basis calculations. Exelon entered the issue into the Corrective Action Program (CAP) for resolution.

This finding was more than minor because it was associated with the Design Control attribute of the Barrier Integrity cornerstone, and affected the Barrier Integrity cornerstone objective to provide reasonable assurance that physical design barriers, including containment, protect the public from radionuclide releases caused by accidents or event. This finding was determined to be of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, and heat removal components. This finding has a cross-cutting aspect in Human Performance, Decision Making, because the licensee did not make a safety significant decision using a systematic process to ensure safety was maintained [H.1(a)]. Specifically, the decision to operate the reactor buildings at lower temperatures was made using an informal process within operations, therefore interdisciplinary input and a review by engineering and other support organizations was not obtained

Inspection Report# : 2009002 *(pdf)*

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 : December 10, 2009