Limerick 1
2Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2013
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate and Untimely Corrective Actions Associated With the Unit 1 Instrument Air System
A self-revealing finding of very low safety significance was identified for Exelon's failure to take adequate and timely corrective actions to address the inadvertent depressurization of the Unit 1 Instrument Air (IA) headers. This led to a repeat depressurization of the Unit 1 IA headers when the service air compressor tripped on July 7, 2013, causing the operators to enter ON-119, "Loss of Instrument Air," and reduce reactor power by 20 percent until IA header pressure could be restored and maintained. Exelon's corrective actions for this issue included replacing all of the IA dryer pre-filters, creating an activity to perform dryer performance monitoring prior to any IA maintenance outage, and recalibrating all of the IA dryer pre-filter differential pressure (D/P) switches. Exelon was also in the process of evaluating a replacement component for the IA dryer D/P switches and investigating the effectiveness of the prioritization of their maintenance backlog strategy. Exelon has entered this issue into their corrective action program (CAP) as Issue Report (IR) 1569901.

Exelon's corrective actions to address the inadvertent depressurization of the Unit 1 IA headers on October 9, 2012, were ineffective and untimely, representing a performance deficiency that was within their ability to foresee and correct. This performance deficiency was determined to be more than minor because it affected the Equipment Performance attribute of the Initiating Events cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, unnecessary transients on the IA header increase the likelihood of a loss of IA, an unplanned down power or a potential rapid plant shutdown due to plant instability. The finding is of very low safety significance (Green) per IMC 0609, Appendix A, Exhibit 1 - Initiating Events Screening Questions, because it did not involve the complete or partial loss of a support system that contributes to the likelihood of, or cause, an initiating event and affected mitigation equipment. The finding had a cross-cutting aspect in the area of Human Performance, Resources, because Exelon did not ensure that personnel, equipment, procedures, and other resources were adequate to assure nuclear safety. Specifically, Exelon did not adequately maintain engineering and maintenance backlogs to support safety, which led to IRs (1426043 and 1426045) to check the operation of the Unit 1 IA dryer pre-filter D/P switches not being performed in a timely manner [H.2(a)]. Exelon did not complete work associated with these IRs and failed to utilize internal operating experience concerning the creation of a time-based preventative maintenance (PM) in order to replace the pre-filters and functionally check the D/P switches prior to conducting maintenance(Section 1R04). Converted cross cutting aspect to H.6.
Inspection Report# : 2013004 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2013
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Correct a Condition Adverse to Quality associated with Defective Material Being Reinstalled into a Safety - Related System
The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," associated with Exelon staff's failure to correct a condition adverse to quality (CAQ) associated with defective material being reinstalled into a safety-related system after the component failed. Specifically, Exelon's corrective actions to address the defective material issues in both Apparent Cause Evaluation (ACE) IR 900755 and Equipment Apparent Cause Evaluation (EACE) IR 1365093 did not prevent the installation of a previously failed circuit board into a safety-related system. This circuit board ultimately failed again, causing operators to declare the Redundant Reactivity Control System (RRCS) inoperable. Exelon's corrective actions included revising procedural guidance for RRCS channel-checks, utilizing an alert system for continuous performance monitoring of al RRCS system parameters, conducting an extent of cause for all existing RRCS out-of-band log entries, revising the maintenance strategy to use new RRCS cards and a time-directed PM to replace failed or old cards and benchmarking the industry maintenance strategy for RRCS. Exelon is also revising material receipt procedures, training all warehouse personnel on the receipt inspection process and performing extent of conditions of all other repairable stock codes. Exelon has entered this issue into their CAP as IR 1569907.

The inspectors determined that Exelon's corrective actions to address a CAQ associated with defective material issues in both ACE IR 900755 and EACE IR 1365093, was a performance deficiency that was within their ability to foresee and correct, and should have been prevented. The performance deficiency was determined to be more than minor because it affected the Procedure Quality and Human Performance attributes of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Further, if left uncorrected, the performance deficiency could have the potential to lead to a more significant safety concern. The performance deficiency was also similar to IMC 0612, Appendix E, example 4.g, in that Exelon's corrective actions were inadequate and failed to correct a CAQ. The finding is of very low safety significance (Green) per IMC 0609, Appendix A, Exhibit 2 - "Mitigating Systems Screening Questions," because RRCS was determined to maintain its operability and functionality, does not represent a loss of system and/or function and does not represent an actual loss of function of a single train for greater than its TS allowed outage time. The finding had a cross-cutting aspect in the area of PI&R, CAP, because Exelon did not take the appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with the safety significance [P.1(d)]. Specifically, Exelon did not take appropriate corrective actions to address the use of new RRCS circuit boards and did not ensure the corrective actions for the D23 Emergency Diesel Generator (EDG) rectifier failure would ensure all failed components that are sent to the vendor for analysis and sent back to the site with no failure mode were evaluated by engineering prior to re-installation (Section 1R15). Converted to cross cutting aspect P.3.
Inspection Report# : 2013004 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Mar 24, 2014
Identified By: NRC
Item Type: FIN Finding
Failure to Evaluate ODCM Change in Accordance with Technical Specification 6.14
The NRC identified an NCV of T/S 6.14, Offsite Dose Calculation Manual (ODCM), for failure to evaluate and provide sufficient information to support a change to the ODCM. Specifically, LGS revised the ODCM to allow the RHRSW monitors to be non-functional due to loss of flow for a period of up to 4 hours before they were required to be declared inoperable and did not provide sufficient information to support the change including a determination that the change would maintain the level of radioactive effluent release control. LGS entered the issue into their CAP as IR 1639697 and revised the applicable alarm response card (ARC-MRC-010 E4) to declare the monitor inoperable under similar conditions. A dose calculation was also completed that indicated no significant public dose consequences associated with the monitor's inoperable status.

The failure to evaluate and provide sufficient information to support a change to the ODCM, in accordance with the requirements of TS 6.14 is a performance deficiency. This performance deficiency is more than minor because it affected the Public Radiation Safety Cornerstone attribute of Plant Facilities/Equipment and Instrumentation. Using IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," dated February 12, 2008, the inspectors determined this to be a finding of very low safety significance (Green) because: the finding was in the effluent release program; was not a substantial failure to implement the effluent program; and the dose to the public did not exceed the 10 Code of Federal Regulations (CFR) Part 50 Appendix I criterion or 10 CFR 20.1301(e) limits. This finding was associated with a cross cutting aspect of Human Performance, Design Margins. Specifically, LGS did not conduct a sufficiently rigorous review of a change in the operability status of a safety-related radiation monitor (RHRSW radiation monitors) to ensure that the change would not adversely impact the level of radioactive effluent release control (H.6).

Inspection Report# : 2014002 *(pdf)*

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

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