

Nine Mile Point 1

3Q/2015 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Aug 28, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Maintenance Rule Monitoring of Unit 1 600 VAC Breaker Super System

The inspectors identified a Green non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50.65, “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” under section (a)(1) and (a)(2) for failing to properly monitor the 600 volt alternating current (VAC) system at Unit 1 in accordance with established maintenance rule reliability criteria to assure that breakers were capable of performing their intended function. Specifically, the inspectors identified four events that were not evaluated against the established (a)(2) reliability criteria. This resulted in a failure to evaluate the 600 VAC system for potential corrective actions in accordance with (a)(1) and did not ensure effective control through preventive maintenance to show the system was capable of performing its intended function in accordance with (a)(2). Exelon’s immediate corrective actions included evaluations of the failures and planning for a maintenance rule expert panel for consideration of placing the system into (a)(1) where corrective actions could be developed to return the system to (a)(2) monitoring. Exelon also noted that issue report (IR) 02416790 documented the challenge associated with overcurrent trip device drift and subsequent pump failures. This IR was open at the time of the inspection with actions to determine if a replacement is possible and to present any potential options to Plant Health Committee in October 2015.

This performance deficiency is more than minor because it is associated with the equipment 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. Specifically, the overcurrent trip devices associated with Unit 1 600 VAC General Electric (GE)-AK breakers were unreliable and resulted in the trip of five safety-related pumps between April 2013 and February 2014. Only one of the five functions was evaluated by Exelon. This impacted the ability of these pumps to be able to perform their function to provide cooling to their respective systems. In accordance with Inspection Manual Chapter (IMC) 0609.04, “Initial Characterization of Findings,” and IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” issued June 19, 2012, the inspectors determined this finding was of very low safety significance (Green) because this finding did not represent an actual loss of system safety function, did not represent an actual loss of function of at least a single train for greater than its technical specification (TS) allowed outage time, and did not represent an actual loss of function of one or more non-TS trains of equipment designated as high safety-significant in accordance with Exelon’s maintenance rule program for greater than 24 hours. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because Exelon failed to thoroughly evaluate the failures against the monitoring criteria specified for the Unit 1 600 VAC breaker super system. Specifically, between April 2013 and February 2014, four breaker failures were identified by the inspectors that were not evaluated against the Unit 1 600 VAC breaker super system, which prevented compliance with 10 CFR 50.65 (a)(1) to ensure corrective actions are established to return the system to (a)(2) monitoring. [P.2]

Inspection Report# : [2015009](#) (pdf)

Significance: N/A Dec 31, 2014

Identified By: NRC

Item Type: VIO Violation

Incomplete and Inaccurate Medical Information Provided by the Licensee Which Impacted Issuance of Initial and Renewal Licenses

During an internal audit, Exelon identified multiple examples of an Apparent Violation (AV) of 10 CFR 50.74 associated with the licensee's failure to notify the NRC within 30 days of changes to licensed operator medical status. During a follow-up inspection, the NRC identified an additional instance of this issue. The NRC also identified multiple examples of an AV of 10 CFR 50.9 for providing information to the NRC in applications for new and/or renewed reactor operator licenses that was not complete and accurate in all material respects and of 10 CFR 55.33(a) (1) for failing to restrict seven operators with disqualifying medical conditions from performing licensed duties without appropriate license conditions.

Compliance was restored on September 25, 2014, when the licensee submitted a letter to the NRC with medical examination Form 396s indicating the new restrictions for the affected operators on shift, and on November 5, 2014, when the licensee requested termination of the license for another operator. This issue was entered into the licensee's corrective action program.

The inspectors determined that Nine Mile Point's failures to report changes in licensed operators' permanent medical conditions to the NRC, to restrict operators with disqualifying medical conditions from performing licensed activities, and to provide complete and accurate information to the NRC was a performance deficiency that was within the licensee's ability to foresee and correct and should have been prevented. The inspectors determined that traditional enforcement applies, as the issue impacted the NRC's ability to perform its regulatory function. Namely, the NRC relies upon the licensee to ensure all new license applicants and licensed operators meet the medical conditions of their licenses. If, during the term of the individual operator license, the operator develops a permanent physical or mental disability that causes the operator to fail to meet the requirements of 10 CFR 55.21, the facility licensee shall notify the Commission, within 30 days of learning of the diagnosis, in accordance with 10 CFR 50.74(c). If the general medical condition of an operator does not meet the minimum standards, the operator must be removed from the conduct of licensed activities, unless the NRC has authorized the operator to continue to perform such functions. Additionally, the NRC issued initial and/or renewal licenses to seven operators based on information that was not complete and accurate in all material aspects. The performance deficiency was screened against the ROP per the guidance of IMC 0612, Appendix B, "Issue Screening." No associated ROP finding was identified and no crosscutting aspect was assigned. This issue constitutes apparent violations in accordance with the NRC's Enforcement Policy, and its final significance will be dispositioned in separate future correspondence.

Inspection Report# : [2014005](#) (pdf)

Inspection Report# : [2015008](#) (pdf)

Significance:  Oct 10, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Deficient Design Control of Unit 1 Electrical Calculations to Evaluate Minimum Voltages to Class 1E Accident Initiated Motors and MOVs during a Design Basis Event

The inspectors identified a Green non-cite violation of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for failure to verify and assure in Unit 1 design basis calculations that adequate voltages would be available to Class 1E accident-initiated motors, motor-operated valves (MOVs), and control circuits powered from the 4160, 600, and 120 volt distribution systems during a design basis loss-of-coolant accident (LOCA) with offsite power available. Specifically, Exelon Generation Company, LLC (Exelon) did not identify and evaluate

the minimum transient voltage for the design basis LOCA event regarding accident-initiated motors, MOVs, and control circuits and did not evaluate the capability of the safety-related main steam isolation valve motor brakes. Immediate corrective action included preliminary calculations using the design grid voltage sag, which determined the reserve service station transformer load tap changers, motor control center control circuits, MOVs, and the main steam isolation valve motor brakes would have adequate voltage to remain capable of performing their safety functions. Exelon entered the issues into their corrective action program as issue report (IR) 2386719, IR 2386824, IR 2387652, IR 2387888, IR2392928, and IR 2393299.

This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance because it was a design deficiency confirmed not to result in a loss of safety-related motor control center MOV operability or functionality. The inspectors assigned a cross-cutting aspect associated with this finding because the long-standing performance deficiency continued during and after Exelon's review of related internal and external operating experience from 2012 to 2014. The inspectors determined this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because Unit 1 staff did not effectively collect, evaluate, and implement relevant internal and external operating experience in a timely manner. [P.5]

Inspection Report# : [2014007](#) (pdf)

Significance:  Oct 10, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Deficient Design Control of Unit 1 Electrical Protection Design to Ensure Survivability of Safety-Related Loads during a LOCA Coincident with Sustained Degraded Voltage

The inspectors identified a Green non-cited violation of Title 10 of The Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," for failure to verify the adequacy of Unit 1 electrical design during a design basis loss-of-coolant accident (LOCA) event with sustained degraded grid voltage. Specifically, Exelon Generation Company, LLC (Exelon) did not verify Class 1E loads would not be damaged or become unavailable for a design basis LOCA with a degraded voltage condition between the degraded voltage set point and the loss of voltage setting for the degraded voltage time delay of 21 +/- 3 seconds and subsequent reconnection to the emergency diesel generator. Immediate corrective actions included preliminary evaluation of the safety-related motor-operated valve (MOV) that operate during the first 21 seconds of the accident, which determined there was reasonable assurance the MOV protective devices would not actuate during sustained degraded grid voltage concurrent with a design basis LOCA. Exelon entered this issue into their corrective action program as issue report (IR) 2387818 and IR 2392780.

The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding was of very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability or functionality. The inspectors determined this issue had a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience, because the organization did not effectively collect, evaluate, and implement relevant internal and external operating experience in a timely manner. Despite NRC Regulatory Issue Summary 2012-11, "Adequacy of Station Electric Distribution System Voltages," and NRC component design bases inspections identifying similar performance deficiencies at other Exelon facilities during the last 3 years, Exelon staff did not effectively evaluate and resolve this operating experience. [P.5]

Inspection Report# : [2014007](#) (pdf)

Significance:  Oct 10, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Deficient Design Control of Protective Device Sizing for Unit 1 Core Spray Injection Motor-Operated Valves

The inspectors identified a Green non-cited violation of Title 10 of The Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," because Exelon Generation Company, LLC (Exelon) did not verify the design adequacy of Unit 1 electrical power to safety-related motor-operated valves (MOVs) to support their design function during design basis events. Specifically, Exelon did not verify that the thermal magnetic breaker protection on core spray loop injection MOV circuits 1V-40-01, 1V-40-09, 1V-40-10, and 1V-40-11 were properly sized to support the design function of repetitive MOV operation (throttling) in response to a design basis loss-of-coolant accident (LOCA). Routine throttling operation of the core spray injection valves could potentially cause a thermal magnetic breaker trip and loss of power to the MOV leading to the valve failing in an indeterminate position and not being capable of performing its design function to control reactor pressure vessel level. Immediate corrective action included guidance to control room operators to close three of the MOVs when required to maintain reactor pressure vessel level and only use MOV 1V-40-09 which had a thermal magnetic breaker tripping design of 17 seconds. Exelon entered this issue into its corrective action program as issue report 2393386.

The finding was more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance (Green) because it was a design deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that the central cause of this finding was not reflective of current performance or current plant modification processes. Therefore, no cross-cutting aspect was assigned.

Inspection Report# : [2014007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Declare Notice of Unusual Event Following Sodium Bisulfite Spill in Unit 1 Screenhouse

The inspectors documented a Green NRC-identified NCV of 10 CFR 50.54(q)(2) when Exelon failed to declare a Notice of Unusual Event Emergency Action Level (EAL) (HU3.1) when entry conditions were met. Specifically, on February 4, 2015, between 9:55 a.m. and 11:15 a.m., access to the screen house was prohibited due to the release of a toxic gas that adversely affected normal plant operations following a spill of sodium bisulfite. Immediate corrective actions included Exelon entering the issue into their corrective action program (CAP) as issue report (IR) 02474142, formally evaluating the decision-making process used during the incident, and clarifying responsibilities for air sampling and the reporting of samples during incidents in the future.

This finding is more than minor because it was associated with the Emergency Preparedness cornerstone attribute of Emergency Response Organization Performance, and affected the cornerstone objective of ensuring that a licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, between 9:55 a.m. and 11:15 a.m., access to the Unit 1 screen house was prohibited due to the release of sodium bisulfite to the screen house, affecting normal plant operations of the station.

This finding was evaluated using IMC 0609, Appendix B, “Emergency Preparedness SDP,” Section 4, “Failure to Implement.” The performance deficiency is associated with the emergency classification planning standard and is considered a risk-significant planning standard (RSPS). The failure to declare a Notice of Unusual Event when directed by the EAL matrix is considered a lost or degraded RSPS in accordance with Section 4 of IMC 0609. Section 4.3.c and Attachment 1 of IMC 0609, Appendix B, provide the significance determination for a “Failure to Implement,” and the performance deficiency was determined to be of very low safety significance (Green). The inspectors determined that the cross-cutting aspect that contributed most to the root cause is Human Performance, Challenge the Unknown: Individuals stop when faced with uncertain conditions. Risks are evaluated and managed before proceeding. Specifically, during the event, an unknown substance was released and at no point was atmospheric analysis used in the EAL declaration decision-making process. Furthermore, although spill response personnel were experiencing symptoms that were not consistent with exposure to a spill of sodium bisulfite, this unexpected condition was not fully assessed by NMPNS for significance and reportability in accordance with procedures [H.11].

Inspection Report# : [2015001](#) (*pdf*)

Occupational Radiation Safety

Significance:  Jun 30, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Notify Changes to Work Scope

The inspectors identified a self-revealing non-cited violation of Unit 1 Technical Specification (TS) 6.4, “Procedures,” for failure to follow the planned scaffold erection work scope that resulted in two personnel receiving unplanned internal exposures. Specifically, on January 6, 2015, workers erecting scaffolding changed the work scope that specified the use of new equipment and used unsurveyed highly contaminated scaffold parts instead, without notifying radiation protection staff of the change in work scope that resulted in two workers receiving unplanned, unintended internal radiation exposures.

The failure to follow the planned work scope is a performance deficiency. The performance deficiency constitutes a finding that is more than minor because the performance deficiency was associated with the Occupational Radiation Safety attribute of program and process and adversely affected the cornerstone objective in the protection of workers from exposure to radioactive material. Specifically, failure to follow the planned work scope resulted in two personnel receiving unplanned internal exposures. The finding is not subject to traditional enforcement, because it did not affect the regulatory process or result in actual safety consequences. Using Inspection Manual Chapter 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding is of very low safety significance (Green) because it did not involve as low as reasonably achievable occupational collective exposure planning and controls, an overexposure, a substantial potential for overexposure, or an impaired ability to assess dose. The cause of the finding is related to the cross-cutting area of Human Performance, Challenge the Unknown, because when workers discovered potentially contaminated scaffold materials in the work area, they did not question whether or not it was appropriate to use the material in their job and did not raise the question to their supervisors or Exelon Generation Company, LLC radiation protection technicians prior to deviating from the planned and briefed work scope. As a result, the radiological risks were not evaluated before proceeding to utilize the unsurveyed highly contaminated components, which resulted in unintended internal radiation exposures to the workers.

Inspection Report# : [2015002](#) (*pdf*)

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

Significance: N/A Sep 15, 2015

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Assessment

The inspectors concluded that Exelon Generating Company, LLC (Exelon) was generally effective in identifying, evaluating, and resolving problems. Exelon personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. Exelon appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that Exelon typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner. However, the inspectors identified two violations of NRC requirements in the area of evaluation of problems.

The inspectors concluded that, in general, Exelon adequately identified, reviewed, and applied relevant industry operating experience to NMPNS operations. In addition, based on those items selected for review, the inspectors determined that Exelon's self-assessments and audits were thorough.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.

Inspection Report# : [2015009](#) (*pdf*)

Last modified : December 15, 2015