

Nine Mile Point 1 4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Significant Condition Adverse to Quality in a Timely Manner

The inspectors identified a non-cited violation of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to ensure that corrective actions to preclude repetition for a significant condition adverse to quality were not implemented in a timely manner. Specifically, corrective actions to preclude repetition for the April 16, 2013, loss of shutdown cooling event to revise two inadequate Unit 1 procedures had not been completed over a year later. If left uncorrected, the inspectors determined there was the potential for 10 different pumps and breakers to unexpectedly trip upon restoration of a direct current (DC) bus. The loss of several of these pumps and loads would result in an unexpected plant transient or require a manual reactor trip. Exelon Generation (Exelon) wrote condition report (CR)-2014-005693 in response to the inspectors' questions and determined that inadequate resources were assigned to this corrective action to preclude repetition. Procedures N1-OP-47A, "125 VDC Power System," and N1-SOP-47A.1, "Loss of DC," were subsequently reviewed and issued on June 12, 2014.

This finding is more than minor because it impacted the procedure quality attribute of the Initiating Events cornerstone and adversely affected the associated 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, if left uncorrected, there was the potential for 10 different pumps and breakers to unexpectedly trip upon restoration of a DC bus. Several of these pumps and loads would result in an unexpected plant transient or require a manual reactor trip. In accordance with Inspection Manual Chapter (IMC) 0609.04, "Initial Characterization of Findings," and Exhibit 1 of IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined that this finding is of very low safety significance (Green) because the finding 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. This finding has a cross-cutting aspect of in the area of Problem Identification and Resolution, 'Resolution', because Exelon did not take effective corrective actions to address an issue in a timely manner commensurate with its safety significance. Specifically, Exelon failed to implement corrective actions to preclude repetition (CA#1 from CR-2013-002926) to revise procedures N1-SOP-47A.1 and N1-OP-47A to ensure recovery from a loss of a DC bus would not result in an unexpected plant transient a year after the event had occurred (P.3).

Inspection Report# : [2014003](#) (*pdf*)

Mitigating Systems

Significance: N/A Dec 31, 2014

Identified By: Licensee

Item Type: AV Apparent Violation

[DRAFT] Failure to Make Timely Reports of Changes in Licensed Operator Medical Status 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 cross-cutting 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*)

Significance: N/A Dec 31, 2014

Identified By: NRC

Item Type: AV Apparent Violation

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

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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.

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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*)

Significance:  Oct 10, 2014

Identified By: NRC

Item Type: NCV NonCited 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 (MOV), 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 NonCited 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 NonCited 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)

Significance:  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Control Measures Employed During Control Room HVAC Modification

The inspectors identified a Green non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion III, "Design Control," because Constellation Energy Nuclear Group, LLC (CENG) did not implement adequate design controls to ensure piping in the reactor building closed loop cooling (RBCLC) system remained operable while implementing a modification to the Unit 1 control room heating and ventilation system. Specifically, while implementing the modification, CENG personnel removed permanent plant supports and piping for the safety-related RBCLC system and did not fully assess how this change could impact the operability of the system with respect to a hydraulic shock or seismic acceleration event. In response to this observation, CENG initiated condition report CR-2014-001676 and evaluated the condition for operability. Existing temporary supports were enhanced to provide additional margin by bracing the structure for horizontal loads. An extent-of-condition walkdown was performed and no additional issues of concern were identified. Subsequently, CENG's operability review determined the RBCLC system had remained operable.

This finding was more than minor because it was associated with the design control 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. Specifically, while implementing the modification, CENG removed permanent plant supports and piping for the safety-related RBCLC system and did not fully assess how this change could impact the operability of the system if a hydraulic shock or seismic acceleration occurred. This finding is also similar to Examples 3.j and 4.k in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," where a temporary modification was installed without adequate design information and adequate design controls were not implemented leading to a reasonable doubt of operability of plant components. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the inspectors determined this finding is of very low safety significance (Green) because the performance deficiency was a design or qualification deficiency that did not result in the inoperability of the RBCLC system. The finding has a cross-cutting aspect in the area of Human Performance, Work Management, because CENG failed to implement a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority. Specifically, CENG failed to ensure that the installed temporary supports were adequate to ensure the RBCLC piping would not be stressed above code allowable values in the event of a seismic acceleration or hydraulic shock event prior to removing the permanently installed seismic supports

Inspection Report# : [2014002](#) (pdf)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

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

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