

Ginna

4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Work Packages Associated with Maintenance on the Main Generator Exciter Air Cooler Reversing Head

A self-revealing Green finding was identified for inadequate development and maintenance of work packages as required by Exelon Generation Company, LLC (Exelon) procedure CNG-MN-4.01-1003, "Work Order Planning," Revision 00701. Specifically, the work packages associated with maintenance on the main generator exciter air cooler reversing head did not adequately incorporate and comply with vendor recommendations, which resulted in a service water leak on the reversing chamber of the generator exciter air cooler, a rapid downpower, and shutdown of the reactor.

This finding is more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone and affected the 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, the work packages associated with maintenance on the main generator exciter air cooler reversing head did not adequately incorporate and comply with vendor specifications, which resulted in a service water leak on the reversing chamber of the generator exciter air cooler, a rapid downpower, and shutdown of the reactor. Additionally, the finding is similar to Example 4.b of Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," in that a performance deficiency caused a transient. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 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 cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of a trip to a stable shutdown condition. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Identification, because Exelon did not implement a corrective action program with a low threshold for identifying issues, and individuals did not identify issues completely, accurately, and in a timely manner in accordance with the program. Specifically, Exelon staff did not initiate condition reports and document reversing head material deficiencies identified by Exelon's vendor and recommended for repair in 2009, 2012, and 2014 [P.1].

Inspection Report# : [2014004](#) (*pdf*)

Significance: G Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Procedure Implementation Results in Inadvertent Engineered Safety Feature Actuation

A self-revealing Green non-cited violation of Technical Specification 5.4.1, "Procedures," was identified for failure to perform maintenance as required by Exelon Generation Company, LLC (Exelon) procedure STP-I-9.1.16, "Undervoltage Protection – 480 Volt Safeguard Bus 16," Revision 01001. Specifically, while performing Step 6.4.2.1 to place the BX1/16 relay toggle switch in the trip position, an incorrect switch manipulation by an instrumentation

and control technician resulted in an engineered safety feature actuation, which included the automatic start of the 'B' emergency diesel generator (EDG) and the de-energization of a safety-related bus. Immediate corrective actions included restoring bus 16 to its normal power supply and entering this issue into the corrective action program as condition report (CR)-2014-002741.

The finding was more than minor because it is associated with the human performance attribute of the Initiating Events cornerstone and affected the 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, due to a personnel error, an incorrect switch was manipulated during bus 16 undervoltage testing. This resulted in the automatic start of the 'B' EDG, the de-energization of bus 16, and the transition of the outage defense-in-depth from a Green to a Yellow risk condition. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Attachment 0609.04, "Initial Characterization of Findings." This attachment directed the inspectors to evaluate the finding using IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." However, IMC 0609, Appendix G, directed the inspectors to contact the senior risk analyst for assistance as it does not apply when there are no fuel assemblies in the reactor vessel. The senior risk analyst directed the inspectors to evaluate the finding using Appendix M, "Significance Determination Process Using Qualitative Criteria," which directed the inspectors to consider a bounding case. For this instance, if the bus had not been recovered with the fuel in the spent fuel pool, the only significant system lost would have been the redundant spent fuel pool cooling system. Therefore, the inspectors determined the finding to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Avoid Complacency, because Exelon personnel did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, Exelon personnel did not implement appropriate error reduction tools or consider the potential undesired consequence of an engineered safety feature actuation before performing work [H.12].

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

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Adhere to Procedural Requirements for Authorizing the Application of a Tagout

A self-revealing Green finding (FIN) was identified because Constellation Energy Nuclear Group, LLC (CENG) failed to authorize the application of a tagout in accordance with procedure CNG-OP-1.01-1007, "Clearance and Safety Tagging," Revision 01101. Specifically, CENG did not adequately implement equipment tagging procedural requirements to verify plant effects and tagout boundary impact prior to removing the specified equipment from service. As a result, two air-operated valves unexpectedly opened when a tagout was being hung and resulted in a trip of all running condensate booster pumps on low suction pressure and a plant transient.

The inspectors determined that the failure to follow procedural requirements was more than minor because it was associated with the configuration control attribute of the Initiating Events cornerstone and affected the 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, CENG did not follow procedural guidance when reviewing the tagout to ensure that the consequences of removing the specified equipment from service had been evaluated from the perspective of plant effects and tagout boundary impacts. This resulted in a plant transient as operators rapidly reduced plant power in order to avoid a more significant plant transient. Additionally, the finding is similar to Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," Example 4.b., in that a personnel error caused a plant transient. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Initial Characterization of Findings," worksheet to IMC 0609, "Significance Determination Process." The attachment instructed the inspectors to utilize IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The inspectors determined the performance deficiency to be of very low safety significance (Green) 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. This finding has a cross-cutting aspect in the area of Human Performance, Avoid Complacency, because CENG individuals did not recognize and plan for the possibility of mistakes even while expecting successful outcomes [H.12].

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

Significance:  Mar 13, 2014

Identified By: NRC

Item Type: FIN Finding

Failure to Effectively Implement Corrective Actions Associated with Heater Drain Tank Pump Tripping Issues

The inspectors identified a Green finding (FIN) for Constellation Energy Nuclear Group's, LLC (CENG's) failure to effectively implement a corrective action (CA) associated with an apparent cause evaluation (ACE) that addressed both heater drain tank pumps tripping on October 21, 2012. Specifically, CENG failed to effectively implement a CA to modify all procedures in which the feedwater system would be impacted by stopping heater drain tank or condensate booster pumps which resulted in both heater drain tank pumps tripping and an unplanned power reduction from approximately 79 percent power to approximately 48 percent power on January 14, 2014. These issues were entered into CENG's corrective action program as condition reports (CR)-2014-000197 and CR-2014-001208.

This finding is more than minor because it is associated with the equipment performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure to effectively implement CA-2012-003493 and modify all procedures impacted by stopping heater drain tank or condensate booster pumps including procedure AP-FW.1, "Abnormal MFW Pump Flow or NPSH," Revision 01802, resulted in both heater drain tank pumps tripping and an unplanned power reduction of approximately 31 percent power. Additionally, this issue is similar to Example 4b described in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," which states that issues are not minor if procedural issues cause a reactor trip or other transient. Using Exhibit 1, "Initiating Events Screening Questions," of IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined this finding did not involve the complete or partial loss of a support system that contributes to the likelihood of, or causes, an initiating event and affects mitigation equipment and is, therefore, of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Procedure Adherence, because individuals did not follow processes, procedures, and work instructions. Specifically, CENG staff did not follow procedure CNG-CA-1.01-1005, "Apparent Cause Evaluation," Revision 00603, and ensure that CAs (CA-2012-003494) were effectively implemented and addressed identified causes associated with the ACE for CR-2012-007133 [H.8].

Inspection Report# : [2014008](#) (*pdf*)

Mitigating Systems

Significance:  Aug 22, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Test Control for Main Steam Isolation Valve (MSIV) Solenoid-Operated Valves

The inspectors identified a finding of very low safety significance involving a non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion XI, "Test Control," in that Exelon Generation Company, LLC (Exelon) did not assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service were identified and performed in accordance with written test

procedures. Specifically, the inspectors determined that the solenoid-operated valves that actuate the MSIVs were not satisfactorily (independently) tested to demonstrate that the isolation valves would perform satisfactorily in service. In response, Exelon entered the issue into the corrective action program, evaluated current operability, and initiated efforts to develop satisfactory testing methods.

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 ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) 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 did not have a cross-cutting aspect because the most significant contributor of the performance deficiency was not reflective of current licensee performance.

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

Significance:  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Adequately Implement the Preventive Maintenance Program Procedure for a Service Water Pump Motor

A self-revealing Green non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," was identified for failure to modify an existing preventive maintenance (PM) task or schedule in accordance with Constellation Energy Nuclear Group's, LLC (CENG's) procedure CNG-AM-1.01-1018, "Preventive Maintenance Program," Revision 00801. Specifically, CENG did not revise the PM for the 'B' service water pump (SWP) motor despite having rewound the stator windings on the four other SWP motors after identifying poor manufacturing quality in the stator winding end turns of each of the motors. This resulted in the 'B' SWP motor failing while in service on December 10, 2013. CENG's immediate corrective actions included replacing the failed motor with a refurbished spare and entering the issue into the corrective action program.

Failure to modify an existing PM task in accordance with the PM program procedure was a performance deficiency within CENG's ability to foresee and correct and should have been prevented. Specifically, CENG did not adequately implement changes to the PM 3-year overhaul task or establish a revised schedule for which the SWP motors should be rewound. This ultimately resulted in the failure of the 'B' SWP motor. This finding 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, due to the failure of the 'B' SWP motor, the SWP was not operable or available until the motor was replaced. The inspectors evaluated the finding using Attachment 0609.04, "Initial Characterization of Findings," worksheet to Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The attachment instructs the inspectors to utilize IMC 0609, Appendix A, "Significance Determination Process for Findings At-Power." The inspectors determined this finding was not a deficiency affecting the design or qualification of a mitigating structure, system, and component, did not represent a loss of system and/or function, and did not represent an actual loss of function of at least a single train. Therefore, the inspectors determined this finding to be of very low safety significance (Green). In accordance with IMC 0612, the finding does not have a cross-cutting aspect, because the performance deficiency occurred between 2005 and 2008, would not likely occur today under similar circumstances, and is not reflective of present plant performance.

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

Significance: G Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Design Basis Analysis for the Emergency Diesel Generators Accounted for Limiting Cold Weather Conditions and Loading

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 ensure that the requirements and the design basis as specified in the Updated Final Safety Analysis Report and Ginna Technical Specification bases were correctly translated into specifications, drawings, procedures, and instructions. Specifically, CENG failed to ensure the design basis analysis for the emergency diesel generators (EDGs) accounted for worst case EDG loading and EDG room heat loads during cold weather conditions which resulted in a condition where there was a reasonable doubt of the operability of the EDGs. CENG's immediate corrective actions included entering the issue into its corrective action program, conducting an operability determination, and implementing compensatory measures via Engineering Change Package (ECP)-13-001076.

The inspectors determined that CENG's failure to provide for verifying or checking the adequacy of design, such as by the performance of design reviews and calculations in accordance with 10 CFR 50, Appendix B, Criterion III, to ensure that EDG room temperatures would not challenge EDG operability, was a performance deficiency that was within CENG's ability to foresee and correct and should have been prevented. This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, following a design basis event during design basis extreme weather conditions, the EDG room temperatures could reach sub-freezing conditions that had not been previously analyzed. This condition could have impacted EDG availability, reliability, and capability if EDG fuel oil temperatures reached their cloud point, if jacket water pressure instrumentation sensing lines froze and resulted in a low jacket water pressure condition, and as other lines like service water pressure instruments for the jacket water and lube oil cooler froze or approached freezing. Additionally, the finding is similar to Example 3.j. of Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," in that the EDG design basis analysis failed to consider worst case conditions which resulted in a reasonable doubt on the operability of the EDGs that necessitated the implementation of compensatory actions via an ECP, extensive data gathering, modification of and evaluation utilizing the GOTHIC computer model, planned permanent modifications, and a past operability determination addressing two lines that could potentially freeze. 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 that this finding is of very low safety significance (Green) because the performance deficiency was a deficiency affecting the design of a mitigating structure, system, and component (SSC), and the SSC maintained its operability. In accordance with IMC 0612, the finding does not have a cross-cutting aspect because the performance deficiency likely occurred during original plant design, would not likely occur today under similar circumstances, and is not reflective of present plant performance.

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

Barrier Integrity

Emergency Preparedness

Significance: G Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of Emergency Preparedness Drill Critique to Identify a Risk-Significant Planning Standard Weakness

The inspectors identified a Green non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50.47 (b)(14) and 10 CFR 50, Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities,” Section IV.F.2.g. Specifically, Constellation Energy Nuclear Group, LLC (CENG) did not identify and critique a weakness related to a risk-significant planning standard during their critique following the March 11, 2014, emergency preparedness drill. CENG’s immediate corrective actions included entering the issues associated with the drill critique into its corrective action plan.

The inspectors determined that CENG’s failure to identify and critique an emergency preparedness drill performance weakness in the formal critique was a performance deficiency that was within CENG’s ability to foresee and correct and should have been prevented. Specifically, CENG did not identify that operators failed to notice the loss of annunciator panels for approximately 7 minutes, contrary to the planned scenario summary and timeline, and that it took a computer alarm, not associated with the loss of annunciator panels, to alert the operators to the loss of the annunciator panels. The inspectors determined that the failure to identify the drill performance weakness was more than minor, because it was associated with the emergency response organization performance attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, CENG’s failure to effectively identify an emergency preparedness drill performance weakness caused a missed opportunity to identify and correct a drill-related performance deficiency. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Attachment 4, “Initial Characterization of Findings.” The attachment instructs the inspectors to utilize IMC 0609, Appendix B, “Emergency Preparedness Significance Determination Process,” when the finding is in the licensee’s Emergency Preparedness cornerstone. The inspectors determined this finding was a critique finding, the drill scope was full scale, the planning standard was a risk-significant planning standard, and the performance opportunity status was a success. Therefore, the inspectors determined the finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Conservative Bias, because CENG personnel did not use decision-making practices that emphasize prudent choices over those that are simply allowable. Specifically, CENG personnel did not exhibit conservative bias in their choice to consider the operators’ identification of the lost annunciator panels timely [H.14].
Inspection Report# : [2014002](#) (*pdf*)

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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