

Ginna

3Q/2014 Plant Inspection Findings

Initiating Events

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 (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 (ESF) 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 (SFP), the only significant system lost would have been the redundant SFP 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 ESF actuation before performing work [H.12].

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

Significance: G 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 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 report (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,” issued August 11, 2009, 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,” issued June 19, 2012, 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:  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) 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:  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,” issued August 11, 2009, 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,” issued June 19, 2012, 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*)

Significance: **W** Dec 31, 2013

Identified By: NRC

Item Type: VIO Violation

Failure to Identify and Correct Non-Hydrostatically Sealed Penetrations into Battery Room 'B'

The inspectors identified a finding associated with an apparent violation of Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion XVI, “Corrective Action,” for Constellation Energy Nuclear Group, LLC (CENG) staff’s failure to assure that conditions adverse to quality were promptly identified and corrected. Specifically, CENG failed to identify the need to hydrostatically seal two cable penetrations between manhole 1 and battery room ‘B’ after the site’s design basis flood height was changed during the NRC Systematic Evaluation Program in 1983; promptly correct the significant adverse condition in May 2013 when the condition was identified and take timely action in early September 2013 when CENG was presented with evidence challenging it’s May 2013 evaluation related to manhole 1 and the improperly sealed penetrations. As a result, various Deer Creek flooding scenarios could have resulted in flooding of both battery rooms. Immediate corrective actions included placing this issue in the corrective action program as condition reports (CR)-2013-003407, CR-2013-005262, and CR-2013-005643; and hydrostatically sealing the penetrations on October 4, 2013.

This finding is more than minor because it is associated with the protection against external factors 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 (i.e., core damage). Specifically, propagating flood water could damage mitigating equipment needed to prevent core damage with a flood below the design basis level of 273.8 feet because of the unsealed penetrations in manhole 1. In accordance with Inspection Manual Chapter (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 utilized Section B, "External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Protection Degraded)," of Appendix A and determined the finding involved the loss or degradation of equipment or function specifically designed to mitigate a flooding initiating event, which requires the inspector to go to Exhibit 4, "External Events Screening Questions." The inspectors determined that a detailed risk evaluation was needed because the loss of equipment and function would degrade two or more trains of a multi-train system or function, and the loss of equipment and function would degrade one or more trains of a system that supports a risk-significant system or function. The staff determined that, currently, there is not an existing SDP risk tool that is suitable to assess the significance of this finding with high confidence, mainly because of the uncertainties associated with extreme flood frequency extrapolations based on limited available historical data. Therefore, the risk evaluation was performed using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The change in core damage frequency estimates ranged from Green, a finding of very low safety significance, to Yellow, a finding of substantial safety significance. A significance and enforcement review panel held on January 28, 2014, made a preliminary determination that the finding was of low to moderate safety significance (White) based on quantitative and qualitative evaluations. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because CENG personnel did not thoroughly evaluate problems such that the resolutions addressed causes. Such evaluations should include properly classifying, prioritizing, and evaluating operability and reportability of conditions adverse to quality. Specifically, CENG personnel had an opportunity to thoroughly evaluate and assess impacts to the plant such that resolutions addressed causes, when two unsealed penetrations into battery room 'B' were identified in May 2013; CENG's evaluation associated with CR-2013-003407 was not thorough and did not consider all flow paths for flooding through manhole 1. Additionally, the condition adverse to quality was not properly evaluated for operability. CENG personnel had an additional opportunity to thoroughly evaluate and assess impacts to the plant such that resolutions addressed causes and properly evaluate for operability when inspectors presented evidence of degraded manhole 1 conditions, e.g., clogged manhole drains, to CENG management on September 5, 2013 [P.1(c)].

Inspection Report# : [2013005](#) (pdf)

Inspection Report# : [2014009](#) (pdf)

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Programmatic Failure to Scope SSCs within the Maintenance Rule Monitoring Program

The inspectors identified a non-cited violation of Title 10 of the Code of Federal Regulations 50.65(b) because CENG did not include safety-related and non-safety-related structures, systems, and components (SSCs) within the scope of the maintenance rule monitoring program. Specifically, CENG failed to appropriately include an estimated 90 safety-related and non-safety-related SSCs within the scope of the maintenance rule monitoring program which could have resulted in a failure to detect SSC degradation and to provide reasonable assurance that these SSCs are capable of fulfilling their intended functions. Immediate corrective actions included placing these issues into the corrective action program as condition reports (CR)-2013-002083, CR-2013-004444, CR-2013-004993, CR-2013-006139, CR-2013-006628, and CR-2013-006674.

The finding is more than minor because if left uncorrected, the finding could become a more significant safety concern. Specifically, the failure to monitor SSC performance and condition could have resulted in a failure to detect SSC degradation and to provide reasonable assurance that these SSCs are capable of fulfilling their intended

functions. The failure to adequately scope an estimated 90 or more components could have resulted in the failure to detect degradation within multiple systems and to provide reasonable assurance that these SSCs are capable of fulfilling their intended functions. Additionally, this issue is similar to Example 3j described in Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," which states that issues are not minor if significant programmatic deficiencies were identified with the issue that could lead to worse errors if uncorrected. The inspectors evaluated the finding using IMC 0612, Attachment 0609.04, "Initial Characterization of Findings." The attachment instructs inspectors to utilize IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using Exhibit 2, "Mitigating Systems Screening Questions," of IMC 0609, Appendix A, the inspectors determined that the finding did not represent an actual loss of function of one or more non-technical specification trains of equipment. Therefore, the inspectors determined the finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because CENG did not thoroughly evaluate problems such that the resolutions addressed causes and extent of conditions. Specifically, CENG had multiple opportunities following the inspectors identification of maintenance rule scoping issues on March 27, 2013, and prior to November 7, 2013, to thoroughly evaluate recent maintenance rule scoping problems such that the resolutions addressed causes and extent of conditions [P.1(c)].

Inspection Report# : [2013005](#) (*pdf*)

Significance: G Dec 31, 2013

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Modify or Establish a PM for the TDAFW DC Lube Oil Pump Switch

A self-revealing Green finding was identified for failure to modify or establish a preventive maintenance (PM) schedule for the turbine-driven auxiliary feedwater (TDAFW) direct current (DC) lube oil pump control switch. On November 18, 2013, plant personnel found the main control room switch for the TDAFW DC lube oil pump failed due to switch contact oxidation. This resulted in the DC oil pump failing to automatically start when demanded during a surveillance test and the continued inoperability of the TDAFW pump. As immediate corrective actions for the November 18 TDAFW DC lube oil switch failure, CENG initiated condition report CR-2013-006727, replaced the switch, verified continuity of the other two switches which were not modified in 1980, and established a compensatory action to verify continuity of the other two switches following manipulation of the switch until they are replaced. Additionally, an appropriate PM will be established for the three switches unless they are modified such that the main control board green light indicates continuity of the circuit.

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 main control board switch for the TDAFW DC lube oil pump, the pump failed to start during testing resulting in the continued inoperability of the TDAFW pump. The inspectors evaluated the finding using Attachment 0609.4, "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 the 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 in 1980 and is not reflective of present plant performance.

Inspection Report# : [2013005](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  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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