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Oconee 3 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Mar 31, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to comply with 10 CFR 55.49.

A green NRC-identified non-cited violation (NCV) of 10 CFR 55.49, "Integrity of Examinations and Tests," was identified because the licensee engaged in an activity that compromised the integrity of examinations. Specifically, the licensee failed to ensure that current week simulator scenarios could not be predicted based on the previous week's simulator scenarios during the annual operating exams required by 10 CFR 55.59, "Requalification." While inspecting the annual operating examination schedules for the required simulator examinations for 2016 and 2017, the inspectors identified that one of the two scenarios that were administered during a single week of the annual exam cycle could be predicted for administration the following week. The licensee did not implement any immediate corrective actions because the exams were completed and there was no evidence of compromise. The licensee documented the issue in nuclear condition report (NCR) 2114313.

This performance deficiency was more than minor because it was associated with the human performance 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. Specifically, using predictable exam development and administration techniques adversely affected the integrity of the administration of the operating exams, which test licensed operator performance in order to ensure timely and correct mitigating actions during an event. Using the Licensed Operator Requalification Significance Determination Process, this finding was determined to be of very low safety significance (Green) because no known compromise of the examinations occurred. The inspectors determined the finding had a cross-cutting aspect of resources in the cross-cutting area of human performance because the licensee failed to ensure that adequate training procedures were available to meet industry standards and ensure that the potential for the compromise of regulatory examinations did

not exist. [H.1] (Section 1R11)

Inspection Report# : 2017001 (*pdf*)

Significance:  Mar 24, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to identify and correct a broken cable trench cover.

The NRC identified a non-cited violation of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to assure that a condition adverse to quality associated with a damaged trench cover on the "yellow" trench was identified and corrected. Specifically, the seismic design function of the trench cover was not identified or recognized at the time of the licensee's original identification of the issue and subsequent NCR generation, and, due to this error, appropriate corrective actions were not assigned or completed. In response to the issue, the licensee replaced the broken trench cover on the "yellow" trench with a temporary cover on March 22, 2017, and planned work order 20147282 to replace it with a permanent cover to restore the design configuration.

This performance deficiency 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 availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, inadequate identification and correction of this condition adverse to quality adversely impacted the trench cover's reliability and capability to perform its function during and following a seismic event. The team determined the finding to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure, system, or component (SSC), and the SSC maintained its operability or functionality. The team determined that the finding was indicative of current licensee performance, because the issue was first identified in January 2017. A cross-cutting aspect of Consistent Process [H.13.] in the Human Performance Area was assigned because individuals did not use a consistent, systematic approach to make decisions. (Section 1R21.2.1.5)

Inspection Report# : 2017007 (*pdf*)

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Appropriate Evaluation of Motor Operated Valve Actuator Output Capability

Green. The NRC identified a non-cited violation (NCV) of Title 10 Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly determine the bounding degraded voltage to be assumed in the determination of motor operated valve (MOV) actuator output capability. Specifically, the licensee did not use appropriate transient voltages as input into the evaluation of the capability of the MOVs that are required to reposition in response to an accident signal. In response, the licensee entered the issue into their corrective action program as nuclear condition report (NCR) 2056895 and planned to formally revise their calculations to reflect the current plant configuration.

This performance deficiency was more than minor because it was associated with the design control attribute of the mitigating systems cornerstone, and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, Oconee's programmatic failure to use bounding terminal voltage values in the evaluation of their automatically actuated, safety-related MOVs did not ensure they would be capable of mitigating accidents when powered from sources other than the 230kV switchyard, thus resulting in doubt on their capability to perform their intended safety function. The finding was determined to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure, system, or component (SSC), and the SSC

maintained its operability or functionality. No cross-cutting aspect was assigned because the inspectors determined that the finding was not indicative of current licensee performance, because the most recent transient analysis that was performed for the sources other than the 230kV switchyard was performed in 2012. (Section 1R15)

Inspection Report# : 2016004 (*pdf*)

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inappropriate Voltage Band in Lee Combustion Turbine Unit Operating Procedure

Green. The NRC identified a NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to identify appropriate procedural updates that were needed to ensure the Lee combustion turbine (LCT) procedures were appropriate for the circumstances and maintained current. Specifically, the licensee did not include appropriate operational limitations in procedures associated with the LCTs. In response, the licensee generated NCR 2058763, verified the LCT automatic voltage regulator setpoint was, and had been, 13.8kV, and generated a corrective action to revise the affected procedures' limits to 13.78kV, a value bounded by station analyses.

This performance deficiency was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, Oconee's failure to limit the operating voltage band of the LCTs to an amount that was demonstrated as acceptable by analysis resulted in doubt on their capability to provide power to safety-related equipment during an accident. The finding was determined to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating SSC, and the SSC maintained its operability or functionality. No cross-cutting aspect was assigned because the inspectors determined that the finding was not indicative of current licensee performance, because the update to the procedures occurred in January and October 2007, after replacement of the LCTs. (Section 1R15)

Inspection Report# : 2016004 (*pdf*)

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: FIN Finding

Failure to Translate Design Requirements to Prevent the Effects of Waterhammer

Green. The NRC identified a finding for the licensee's failure to translate the limiting flow rate design requirement into station procedures used to start and operate the alternate reactor building cooling (RBC) system, in accordance with the Duke Energy Carolinas Topical Report, Quality Assurance Plan (QAP). Specifically, the licensee failed to translate the limiting flow rate of 170 gallons per minute (gpm) into Procedure AP/0/A/1700/051, "Alternate Reactor Building Cooling," Revision (Rev.) 2, to ensure prevention of waterhammer on the "A" reactor building cooling unit (RBCU) or connecting low pressure service water (LPSW) lines when starting the RBCU Hale pump. The licensee entered this issue into their corrective action program as Action Request (AR) 02049903 and revised Procedure AP/0/A/1700/051 to limit the RBCU Hale pump discharge flow to each affected unit to an initial fill rate of 120 gpm or less.

The performance deficiency was determined to be more than minor because it adversely affected the protection against external factors 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. Specifically, opening the RBCU Hale pump discharge valve four turns, as specified in the procedure,

would have resulted in filling the alternate RBC system at approximately 600-700 gpm and exceeding the design flow rate of 170 gpm established to prevent equipment and piping damage as a result of waterhammer. This provided a reasonable doubt that the alternate RBC system had the capability to reliably perform its intended safety function and, in turn, that the protected service water (PSW) system had the capability to meet its 30-day mission time during a turbine building fire that resulted in a loss of offsite power. The finding was determined to be of very low safety significance (Green) because the finding would not have resulted in a fire that caused secondary fires outside of the originating fire area due to circuit issues and did not affect the ability to reach and maintain a stable plant condition within the first 24-hours of a fire event. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of design margin, in the area of human performance. Specifically, the licensee failed to operate and maintain the alternate RBC system equipment within design margins when they did not translate design requirements from Engineering Change (EC) 110008 and Calculation OSC-8107 into station procedures. [H.6] (Section 1R17)

Inspection Report# : 2016003 (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : September 05, 2017

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