

Oconee 2

4Q/2011 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 16, 2011

Identified By: NRC

Item Type: VIO Violation

Failure to Promptly Identify and Correct a Condition Adverse to Quality Involving the Environmental Qualification of Limitorque Valve Actuators

10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and non-conformances are promptly identified and corrected.

10 CFR 50.49(f) requires that each item of electric equipment important to safety shall be qualified by one of the following methods: (1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, (2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable, (3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable, or (4) Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

Contrary to the above, from October to November 2010 (Unit 3 refueling outage), from April to June 2011 (Unit 1 refueling outage), and in November 2011 (Unit 2 refueling outage), the licensee failed to establish measures to assure that a condition adverse to quality, identified by the NRC in NCV 2010004-03, was promptly identified and corrected. Specifically, the licensee missed reasonable opportunities during each Unit's refueling outage to confirm the population of Limitorque actuators that were potentially installed in an unqualified configuration in order to properly assess the extent of the non-conforming condition discussed in NCV 2010004-03 and take appropriate corrective actions. Consequently, an unknown population of Limitorque actuators in Units 1, 2 and 3 remained in a configuration that was not qualified in accordance with one of the methods described in 10 CFR 50.49(f).

This violation is associated with a Green Significance Determination Process finding.

Inspection Report# : [2011008](#) (*pdf*)

Significance:  Oct 07, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Operability Evaluation for the SSF

A NRC-identified NCV of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified when the licensee failed to perform an adequate operability evaluation and failed to perform a 50.59 evaluation for a compensatory measure for the SSF ASW subsystem in accordance with NSD 203.

The failure to perform an adequate operability evaluation for the SSF ASW subsystem in accordance with NSD 203 was a PD. There were two examples of this PD. The first example was more than minor because it was associated with the Design Control attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective in that the licensee failed to assure the SSF pressurizer heater breakers would function under expected

environmental conditions before declaring the SSF operable. The second example was more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective in that the compensatory measure used to support the SSF as OBDN required prior NRC review and approval. The finding was determined to be of very low safety significance (Green) because the finding because operability of the SSF ASW subsystem was not affected. The PD was related to the cross-cutting aspect of using conservative assumptions in decision-making in the Decision-Making component of the Human Performance cross-cutting area in that the licensee declared the SSF OBDN without validated testing to demonstrate the SSF pressurizer heater breakers would function under design basis conditions and relied on an unapproved analysis method to support a compensatory measure. [H.1(b)]

Inspection Report# : [2011018](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correctly process a UFSAR change

An NRC-identified non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings, was identified when the licensee failed to follow NSD 220, Updated Final Safety Analysis Report (UFSAR) Revision Process, and processed a technical change to the UFSAR as a non-technical change. The licensee retracted the UFSAR change and intends to submit a License Amendment Request to correct the discrepancy between the facility and the UFSAR.

The failure to follow NSD 220 was a performance deficiency (PD). This PD was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Design Control and adversely affected the cornerstone objective in that the licensee used the non-technical editorial change process to modify the qualification of equipment relied upon to mitigate a seismic-induced turbine building flood when a license amendment was required. The inspectors used IMC 0609, Attachment 4, Phase 1 – Initial Screening and Characterization of Findings, and determined the finding was of very low safety significance (Green) because the finding did not result in loss of operability or functionality. The PD directly involved the cross-cutting aspect of using conservative assumptions in decision making in the Decision-Making component of the Human Performance cross-cutting area in that the licensee relied on insufficient information to process a UFSAR change as a non-technical change. [H.1(b)]

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Analyze the Pressurizer Safety valves and PORV and Downstream Piping at the correct Pressure

Green. The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control”, for the licensee’s failure to perform a pressurizer safety valve and pressurizer Power Operated Relief Valve (PORV) analysis that included input parameters consistent with current plant design bases. The licensee entered the issue into their corrective action program as PIP O-11-11449 and performed additional analyses and evaluations to assure operability of components.

The licensee’s failure to perform a calculation determining the adequacy of the pressurizer safety valves, PORV, and downstream piping at the design basis accident pressure is a performance deficiency (PD). This PD was more than minor because it affected the Mitigating Systems Cornerstone attribute of equipment performance to ensure the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. In addition the finding is similar to IMC 0612 Appendix E, example 3.j because the issue resulted in a condition where there was a reasonable doubt with respect to operability of safety-related components. Specifically, the pressurizer safety valves, pressurizer PORV and downstream piping operate to mitigate the overpressure transient caused by the design basis rod ejection accident. However, these valves and associated piping were analyzed at a lower pressure than the pressure determined in the (Updated) Final safety Analysis Report (UFSAR) Chapter 15 analysis for that accident creating a reasonable doubt that this equipment would operate properly during that design basis accident. Failing to analyze this equipment at the proper pressure resulted in a failure to ensure its availability, reliability and capability to respond to initiating events to prevent undesirable consequences. The finding was of very

low safety significance because it was a design deficiency confirmed not to result in the loss of operability or functionality. The team determined that no cross cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R21.2.1)

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Calculations for Keowee Voltage Relays

Green. The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control”, for the licensee’s failure to perform adequate calculations to support the Keowee generator voltage trip setpoints provided in Technical Specification 3.8.1.17. The licensee entered these issues into their corrective action program as PIPs O-11-10907 and O-11-11120, and performed evaluations to provide reasonable assurance that components would have adequate voltage pending formal reanalysis.

The team determined that the failure to perform adequate calculations to support the Keowee generator voltage trip setpoints provided in Technical Specification 3.8.1.17 was a performance deficiency (PD). The PD was more than minor because it affected the Mitigating Systems Cornerstone attribute of Design Control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition the finding is similar to IMC 0612 Appendix E, example 3.j because the issue resulted in a condition where there was a reasonable doubt with respect to operability of safety-related components. Specifically, there was reasonable doubt as to whether the safety related plant Motor Operated Valves (MOV) and Motor Control Center (MCC) starters would have adequate voltage to perform their safety function following a failure of a Keowee generator voltage regulator. The finding was considered to be of very low safety significance (Green) since this was a design deficiency confirmed not to have resulted in a loss of operability or functionality. The team determined that no cross cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R21.2.3)

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Adequate Calculations for MCC Control Circuits

Green. The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control”, for the licensee’s failure to perform adequate voltage calculations for safety-related Motor Control Center (MCC) 120VAC control circuits. The licensee entered these issues into their corrective action program as PIPs O-11-10907 and O-11-11120, and performed evaluations to provide reasonable assurance that components would have adequate voltage to enable them to perform their intended safety function.

The team determined that the failure to perform adequate design calculations for 120VAC control circuits was a performance deficiency (PD). The PD was more than minor because it affected the Mitigating Systems Cornerstone attribute of Design Control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition the finding is similar to IMC 0612 Appendix E, example 3.j because the issue resulted in a condition where there was a reasonable doubt with respect to operability of safety-related components. Specifically, there was reasonable doubt as to whether the safety MCC starters would have adequate control voltage to perform their safety function during all required conditions. The finding was considered to be of very low safety significance (Green) since this was a design deficiency confirmed not to have resulted in a loss of operability or functionality. The team determined that no cross-cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R21.2.3)

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control Circuit Voltage Calculations for 4160V breakers

Green. The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control”, for the licensee’s failure to perform adequate voltage calculations for safety-related 4160V circuit breaker 125VDC control circuits. The licensee entered these issues into their corrective action program as PIPs O-11-11438, and performed evaluations to provide reasonable assurance that components would have adequate voltage pending formal re-analysis.

The team determined that the failure to perform adequate design calculations for 125VDC control circuits was a performance deficiency (PD). The PD was more than minor because it affected the Mitigating Systems Cornerstone attribute of Design Control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition, the finding is similar to IMC 0612 Appendix E, example 3.j because the issue resulted in a condition where there was a reasonable doubt with respect to operability of safety-related components. Specifically, there was reasonable doubt as to whether the safety related circuit breakers would have adequate control voltage to perform their safety function during all required conditions. The finding was considered to be of very low safety significance since this was a design deficiency confirmed not to have resulted in a loss of operability or functionality. The team determined that no cross cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R21.2.12)

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Installation of SSF Submersible Pump

Green. The team identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings”, for the licensee’s failure to maintain complete and accurate procedures for installation of the Standby Shutdown Facility (SSF) submersible pump using the alternate means of pump installation. This condition could have prevented installation of that pump in the time frame required if the primary means of pump installation became unavailable. The licensee was not capable of completing the required alternate means of installing the SSF submersible pump as documented in procedure AM/0/1300/059 “Pump-Submersible-Emergency SSF Water Supply-Installation and Removal”, which is required to be completed for sections of “Loss of SSW” and “Standby Shutdown Facility emergency operating procedures”. The licensee implemented compensatory measures to ensure the primary method is always available and entered the issue into their corrective action program as PIP O-11-10962.

The team determined that the failure to maintain complete and accurate abnormal operating procedures for SSF submersible pump installation is a performance deficiency (PD). This PD is more than minor because it affected the Mitigating Systems Cornerstone attribute of design control to ensure the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. In addition, if left uncorrected, the alternative means for installing the SSF submersible pump, which provides required cooling water to the SSF safety related equipment (SSF Diesel, SSF ASW pump, etc.) during a LOOP as documented in AM/0/1300/059 could not be accomplished. This finding was considered to be of very low safety significance since it was not a design or qualification deficiency, did not result in the loss of any system safety function and was not risk significant due to seismic, flooding or severe weather. The inspectors determined that the finding had a cross cutting aspect of adequate emergency equipment in the resources component of the human performance area. The licensee did not have emergency equipment available as specified in their procedures. [H.2(d)](Section 1R21.2.15)

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Account for the Full Range of Emergency Power AC Frequency When Evaluating the Performance of Safety-Related Components

Green. The team identified a Green non cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design

Control”, for the licensee’s failure to account for the full range of emergency AC power frequencies allowed by the surveillance procedure when evaluating the performance of safety related pumps. The licensee entered the issue into their corrective action program as PIPs O-11-10959, O-11-10954, O-11-10917, and O-11-11015 and performed additional analyses and evaluations to provide reasonable assurance of operability of components.

The team determined that the failure to perform engineering evaluations for the full range of emergency AC power frequencies allowed by the surveillance procedure when evaluating safety related pump performance is a performance deficiency (PD). This PD was more than minor because it affects the Mitigating Systems Cornerstone attribute of design control to ensure the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. In addition, if left uncorrected, the finding had the potential to lead to a more significant safety concern in that safety- related equipment may not operate properly at all emergency AC power frequencies allowed by the surveillance procedure. This finding is similar to IMC 0612, Appendix E, example 3.j because the issue resulted in a condition where there was a reasonable doubt with respect to operability of safety-related components. Specifically, pumps and fans operating at the high end of the allowable AC frequency will operate at higher speed generating flow rates that exceed the design flow rates. This is nonconservative because a higher flow rate elevates the net positive suction head required for the pumps. It is also non-conservative because air vortices will start forming at higher water levels in tanks and other suction sources. The deficiencies described above resulted in a reasonable doubt that safety-related equipment could perform their functions under the most limiting conditions. The finding was of very low safety significance because it was a design deficiency confirmed not to result in the loss of operability or functionality. The team determined that no cross-cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R21.4).

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 20, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Installation of Non-Qualified SSF Pressurizer Heater Breakers Impacting Operability During Certain SSFCredited Events

An NRC-identified Green NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for the licensee’s failure to install Standby Shutdown Facility (SSF) pressurizer heater breakers that were qualified for expected environmental conditions inside of containment during design basis events. The licensee installed replacement breakers and the SSF declared operable without testing to support that the replacement breakers would function under elevated containment temperatures.

The failure to maintain design control of the SSF was a performance deficiency (PD). The PD was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and adversely affected the cornerstone objective in that failure to maintain equipment qualification did not provide reasonable assurance that the SSF Auxiliary Service Water (ASW) subsystem would perform its safety function. The finding was assessed using IMC 0609, Attachment 4, and determined that a Phase III analysis was required because the finding involved the loss or degradation of equipment designed to mitigate external initiating events. The Phase III analysis determined the finding to be of very low safety significance (Green). This finding had a cross-cutting aspect in the area of Human Performance under the Procedural Compliance aspect of the Work Practices component in that the licensee failed to follow the requirements set forth in EDM 601, Engineering Change. [H.4(b)].

Inspection Report# : [2011018](#) (*pdf*)

Inspection Report# : [2011019](#) (*pdf*)

Significance:  Sep 09, 2011

Identified By: NRC

Item Type: VIO Violation

Pressurizer Heater Breaker Installation That Would not have Functioned During Certain SSF-Credited Events

A licensee-identified potentially greater than Green apparent violation (AV) of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified when the licensee failed to maintain design control of the Standby Shutdown Facility (SSF). Because the safety significance of this finding is potentially greater than Green, it is being treated as an NRCidentified finding.

The failure to maintain design control of the SSF was a performance deficiency (PD). The PD was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and adversely affected the cornerstone objective in that failure to maintain equipment qualification did not provide reasonable assurance that the SSF Auxiliary Service Water subsystem would perform its safety function. A Phase III analysis was required because the finding involved the loss or degradation of equipment designed to mitigate external initiating events. A cross-cutting aspect was not identified because the finding does not represent current plant performance.

Inspection Report# : [2011017](#) (*pdf*)

Inspection Report# : [2011019](#) (*pdf*)

Significance:  Sep 09, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain SSF Pressurizer Heater Breakers as Safety-Related Components

An NRC-identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for the licensee's failure to maintain the Standby Shutdown Facility (SSF) pressurizer heater breakers and associated electrical components as safety-related components or seismically-qualified as specified in the SSF licensing basis documents.

The failure to maintain SSF systems, structures, and components (SSCs) as safety-related and seismically-qualified as required by the SSF licensing basis was a performance deficiency (PD). This PD was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Configuration Control and adversely affects the cornerstone objective in that failure to maintain equipment qualification did not provide reasonable assurance that the SSF Auxiliary Service Water subsystem would perform its safety function. The finding was of very low safety significance because the finding involved a design or qualification deficiency confirmed not to result in loss of operability or functionality. The PD directly involved the cross-cutting aspect of thoroughly evaluates problems such that the resolutions address causes and extent of conditions, as necessary including evaluating for operability in the Corrective Action Program component of the Problem Identification and Resolution cross-cutting area for not properly evaluating an immediate determination of operability (IDO). [P.1(c)]

Inspection Report# : [2011017](#) (*pdf*)

Significance:  Jun 30, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Design Verification of the NPBS-BWST/SSF Trench Foundation

A self-revealing finding was identified for the licensee's failure to implement the requirements of the modification program to ensure the natural phenomenon barrier system (NPBS) borated water storage tank (BWST)/standby shutdown facility (SSF) trench foundation modification did not adversely impact the yard drain system's function. The condition was entered into the licensee's corrective action program (CAP) as problem investigation program (PIP) O-11-3285.

The failure to implement the requirements of the modification program to verify the NPBS BWST/SSF trench foundation modification did not adversely impact flood protection features was a performance deficiency (PD). The PD was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors - Flood Hazard and adversely affected the cornerstone objective in that the design modification bypassed the yard drain system which was credited for external flood protection. The finding was of very low safety significance (Green) because the rainwater intrusion did not result in the loss of operability or functionality of safety-related structures, systems, and components (SSCs). The cause of the finding was directly related to the appropriately planning work activities cross-cutting aspect of the Work Control component in the area of Human Performance because the licensee failed to incorporate environmental conditions which may impact SSCs into the modification. [H.3(a)] (Section 1R01)

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate risk management associated with the removal of the Unit 2 west penetration room girts

An NRC-identified non-cited violation of 10 CFR 50.65(a)(4) was identified for the licensee's failure to effectively implement risk mitigation actions as defined in the Complex Activity Plan for the Unit 2 Cask Decon Tank Room and West Penetration Room (WPR) Siding Demolition project. A temporary seismic barrier was not properly constructed and would not have protected safety-related equipment in the event of a WPR wall collapse. The licensee delayed removal of the girts until the construction deficiencies were corrected. This condition was placed into the corrective action program (CAP) as Problem Investigation Program report (PIP) O-11-00747.

The failure to implement a risk mitigation action in accordance with the Complex Activity Plan was a performance deficiency (PD). The PD was more than minor because it had the potential to become a more significant safety concern if left uncorrected in that the temporary seismic barrier would not have performed its intended function of protecting safety-related equipment if the WPR wall collapsed. The finding was of very low safety significance (Green) because there was no increase in the Incremental Core Damage Probability since the construction deficiencies were corrected prior to removal of the girts. The cause of the finding was directly related to the Supervisory and Management Oversight aspect of the Work Practices component in the cross-cutting area of Human Performance because the licensee failed to ensure that the appropriate level of supervisory and management oversight was applied to the installation of the temporary seismic barrier. [H.4(c)] (Section 1R13)

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate post modification testing to ensure SSF DG functionality

An NRC-identified [Green Non-cited] Violation of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for the licensee's failure to ensure that a modification installed on the Safe Shutdown Facility (SSF) Diesel Generator (DG) monitoring panel would not affect the ability of the SSF Power subsystem to perform its design function. The finding does not represent an immediate safety concern because the chart recorder was modified so that it did not send an output signal to the SSF control and protection logic circuit.

The licensee's failure to ensure the post-modification testing was adequate to verify the modification did not affect the SSF Power subsystem's ability to perform its design function was a performance deficiency (PD). The PD was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance and adversely impacted the cornerstone objective in that the modification would have prevented the SSF DG from starting and supplying power to the SSF. The safety significance of this finding was To Be Determined pending completion of a Phase III risk analysis. The finding was directly related to the cross-cutting area of Human Performance under the Procedural Compliance aspect of the Work Practices component because the licensee failed to ensure station modification program requirements were followed in the development of post-modification testing. [H.4(b)] (Section 1R18)

Inspection Report# : [2011002](#) (*pdf*)

Inspection Report# : [2011003](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to promptly identify and correct an adverse condition affecting operability of letdown line containment isolation valves

An NRC-identified non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified for the licensee's failure to promptly identify and correct a condition adverse to quality. The licensee failed to identify and correct a degraded condition associated with containment isolation valves 1HP-5, 2HP-5 and 3HP-5 following the

identification of a degraded condition on valve 1HP-5. The licensee restored closing margin to the Unit 1 valve during its refueling outage which began April 2, 2011, by installing a permanent modification on the valve actuator. An interim modification was installed on June 11, 2011, for Unit 2, and on June 10, 2011, for Unit 3 to restore closing margin to those valves.

The licensee's failure to promptly identify the degraded condition of 2HP-5 and 3HP-5 and adequately correct the condition on 1HP-5 as required by 10 CFR 50, Appendix B, Criterion XVI, was a performance deficiency (PD). The PD was more than minor because it was associated with the Barrier Integrity cornerstone attribute of Design Control and adversely impacted the cornerstone objective because the degraded condition had the potential to result in a containment bypass pathway. The inspectors determined a Phase 3 analysis was required because the finding represented a potential containment bypass pathway that would not be isolable following certain events analyzed in Chapter 15 of the Updated Final Safety Analysis Report. A Phase 3 analysis was performed by a regional Senior Reactor Analyst (SRA) who determined that the finding was of very low safety significance (Green) because the line break Large Early Release Frequency (LERF), and the Station Blackout (SBO)/Standby Shutdown Facility (SSF) core damage frequency (CDF) results were less than 1×10^{-6} . The finding directly involved the cross-cutting area of Human Performance under the Conservative Assumptions and Safe Actions aspect of the Decision Making component, in that the licensee failed to demonstrate conservative decision making in their evaluation of the operability of the Units 1, 2, and 3 letdown line containment isolation valves. [H.1(b)] (Section 1R15)

Inspection Report# : [2011004](#) (pdf)

Significance:  Sep 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to verify adequate closure margin

A self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified when the licensee failed to follow their modification process. The licensee did not verify the valve actuator margin to be greater than the margin specified in procedure EDM 601, Engineering Change Manual, following internal changes to the reactor coolant system (RCS) letdown line outboard containment isolation valves (CIVs) on all three units. As a result, the CIVs would not have fully closed as required against all postulated differential pressures (dPs) for events defined in Chapter 15 of the Updated Final Safety Analysis Report. The licensee entered this issue into their Corrective Action Program (CAP) as Problem Investigation Program report (PIP) O-11-0218.

The licensee's failure to implement the modification process was a performance deficiency (PD). The PD was determined to be more than minor because it was associated with the Barrier Integrity cornerstone attribute of Design Control and adversely impacted the cornerstone objective in that the RCS letdown line outboard CIVs could not perform their design function to fully close during all postulated events. The inspectors determined that a Phase 3 analysis was required. A Phase 3 was performed by a regional SRA who determined this finding was of very low safety significance (Green) because the line break Large Early Release Frequency, and the Station Blackout/Standby Shutdown Facility core damage frequency results were less than 1×10^{-6} . No cross cutting aspects were identified based on the issue not being indicative of current licensee performance. (Section 1R18)

Inspection Report# : [2011004](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Adequate Surveys to Identify Potential Radiological Hazards

A Green self-revealing, non-cited violation (NCV) of 10 CFR 20.1501(a) was identified for failure to perform adequate surveys to verify radiological conditions within the Unit 3 Reactor Building (RB). This resulted in a worker unknowingly entering an area with dose rates exceeding Locked High Radiation Area (LHRA) conditions, i.e., dose rates exceeding 1,000 millirem per hour (mrem/hr) at 30 centimeters (cm). Corrective actions included surveying all plant areas for proper posting and control in which no additional problem areas were identified, reviewing jobs that had the potential for dose rate changes, and reviewing electronic dosimeter (ED) trends during each shift.

The inspectors determined that the failure to identify the LHRA through adequate surveys that could have revealed changing radiological conditions was a performance deficiency. This performance deficiency was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process (Monitoring and RP Controls) and adversely affected the cornerstone objective in that failure to identify significant sources of radiation could lead to unintended occupational exposures. The finding was determined to be of very low safety significance (Green) because it was not related to As Low As is Reasonably Achievable (ALARA) Planning and the ability to assess dose was not compromised. The finding was directly related to the cross-cutting aspect of Appropriate Coordination of Work Activities in the Work Control component of the Human Performance area because the licensee failed to identify the change in radiological conditions. [H.3(b)].

Inspection Report# : [2011005](#) (*pdf*)

Significance:  May 19, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to take required compensatory actions for 1 and 2 RIA-40 condenser off-gas radiation monitor inoperability

Green: An NRC-identified Non-Cited Violation (NCV) of Technical Specification 5.4.1.d, for failure to follow procedures NSD 513, "Primary to Secondary Leak Monitoring Program," and OP/0/A/1106/031, "Primary to Secondary Leak Rate Monitoring and Instrumentation," which required compensatory actions and compensatory sampling during certain times when RIA-40 (Condenser Off-Gas Radiation Monitor) was out of service. This violation was entered into the licensee's corrective action program under PIP O-10-06151.

The failure to recognize that the condenser off-gas radiation monitors were inoperable was a performance deficiency. This performance deficiency is more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective in that the capability to detect, quantify, and respond to primary to secondary leakage was degraded. The significance of this was determined to be of very low safety significance (Green) because the finding did not result in a loss of safety function. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program component because the licensee failed to recognize that 1, 2 RIA-40 were inoperable, and to take appropriate corrective actions to address the issue in a comprehensive manner commensurate with its safety significance and complexity [P.1 (d)] (Section 2RS6).

Inspection Report# : [2011016](#) (*pdf*)

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Dec 16, 2011

Identified By: NRC

Item Type: FIN Finding

2011 Oconee PI&R Summary

The inspectors concluded that, in general, problems were properly identified, prioritized, evaluated, and corrected. The licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the number of issues entered into the Problem Investigation Program (PIP) during the review period and the low safety significance of deficiencies identified by the NRC that had not been previously identified by the licensee. In addition to the open trend discussed in NRC Inspection Report 2011003 associated with inconsistent initiation of PIPs and describing plant issues in sufficient detail and clarity, the inspectors identified various observations, including performance deficiencies of minor significance, where plant issues were not adequately identified in the CAP via PIP documents. Generally, prioritization and evaluation of issues, formal root cause evaluations for significant problems, and corrective actions specified for problems were consistent with licensee CAP procedures. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner. However, the inspectors identified some weaknesses in the problem evaluation and corrective action areas, including a finding of very low safety significance and multiple minor performance deficiencies, where the licensee either failed or experienced challenges to meet their CAP procedure requirements and guidelines.

The inspectors determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. The inspectors identified one observation in this assessment area concerning the licensee's process to follow-up regulatory issues. Operating Experience (OE) usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, plant operations, and cause evaluations. However, the inspectors identified some weaknesses in the effectiveness of the licensee's OE program.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

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