Oconee 2
2Q/2012 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to perform a calculation to determine site PMP ponding levels in a timely manner
An NRC-identified non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified for the licensee's failure to implement corrective actions for a condition adverse to quality. The licensee did not develop a calculation to determine the maximum on-site water level resulting from a Probable Maximum Precipitation (PMP) event in a timely manner. Corrective actions included development of a calculation bounding the expected water level resulting from a PMP event. This violation is in the licensee's corrective action program (CAP) as PIP O-12-7994.

The performance deficiency (PD) was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Design Control and adversely impacted the cornerstone objective because there was reasonable doubt that plant equipment was adequately protected from the increased water level and therefore had the potential to result in a loss of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) because the licensee subsequently demonstrated that the water entering the plant structures would not have resulted in the loss of safety-related or risk-significant equipment. This finding does not have a cross-cutting aspect because the performance deficiency was not indicative of current plant performance. (Section 1R01)

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow the engineering change process
An NRC-identified non-cited violation of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings, was identified for the licensee's failure to follow EDM 601, Engineering Change Manual, during the design and construction of the Protected Service Water (PSW) ductbank / manhole structure. As a result, rainwater accumulation during a Probable Maximum Precipitation (PMP) event could enter the Auxiliary Building (AB). Corrective actions included sealing penetrations, installation of an isolation valve, revising procedures, and conducting training. This violation is in the licensee's CAP as PIPs O-12-1317, O-12-1876, O-12-1906 and O-12-2443.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors - Flooding and adversely affected the cornerstone objective in that water from a PMP event could enter the AB and adversely impact safety-related and / or risk-significant equipment. The licensee was required to perform extensive modeling and calculations to determine what the impact from a PMP event would be on the SSC's located in the lower elevations of the AB. The finding was of very low safety significance due to the high likelihood that the source of the water leaking into the AB would be correctly identified and isolated prior to the loss of safety-related equipment due to the flood. The cause of the finding

was directly related to the aspect of ensuring supervisory oversight of work activities such that nuclear safety is supported 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 during design, modification and construction of Manhole 7. [H.4(c)] (Section 1R01)

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: FIN Finding
Failure to Adequately Test Safety-Significant Medium Voltage Cables
An NRC-Identified finding was identified for the licensee's failure to develop an adequate procedure for performing cable degradation testing on medium voltage cables. Consequently, a degraded condition of one of the conductors from CT-5 to the standby buses was not addressed for approximately 18 months and subsequently failed accruing approximately 30 days of unavailability to replace the cable.

The performance deficiency (PD) was determined to be more than minor as it affected the Mitigating Systems cornerstone attribute of equipment performance in that failure to identify the degraded condition resulted in unplanned unavailability of the CT-5 power path. The finding was of very low safety significance because the "Y" phase cable from CT-5 was capable of performing its function from June 2010 until December 22, 2011. The cause of this finding was directly related to the implementation of operating experience aspect of the Operating Experience component of the Problem Identification and Resolution cross-cutting area, in that, the licensee failed to incorporate industry guidance to establish test acceptance criteria for degradation of power cables insulation. [P.2(b)]
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Installation of Safety-related Control Cables
An NRC-Identified non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for the licensee's failure to develop adequate procedures governing the installation of safety related control cables. The work package did not contain the maximum tension limits and the specified testing method was inadequate to demonstrate that control cables had not been damaged during the cable pull. The licensee revised TI/0/A/3000/030, PSW Cable Pulling in Duct Banks Using Mechanical Device, and re-tested the control cable ensure its functional integrity.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective in that it could represent an indeterminate functional condition for proper control functions for safety-related equipment operation in the PSW and the SSF. The finding was of very low safety significance because it did not result in the loss of any system safety function. The cause of the finding directly involved the cross-cutting aspect of appropriate planning of work activities in the Work Control component of the Human Performance area, in that the licensee failed to implement procedures which established planned contingencies, compensatory actions, and abort criteria. [H.3(a)]

Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: FIN Finding
Failure to Ensure UFSAR described Flood Protection Measures In Place
An NRC-Identified finding was identified for the licensee's failure to ensure the Oconee UFSAR-described Auxiliary Building (AB) flood protection measures were maintained. Penetrations were not included in a surveillance program to verify below-grade penetrations would not allow flooding of the AB existed below the design basis 796.5 foot

mean sea level (msl) elevation.

The performance deficiency was more than minor because if left uncorrected, it could lead to a more significant safety concern, in that, other onsite activities such as excavation work exterior to the AB walls could provide a pathway for flood waters to enter the AB through the uncontrolled penetrations causing the loss of accident mitigation systems. The finding was of very low safety significance because an actual loss of operability or functionality did not occur. The cause of the finding was directly related to the appropriate corrective actions aspect of the Corrective Action Program component in the area of Problem Identification and Resolution because the licensee failed to correct the O-310 K series to identify that all external AB walls as flood barriers. [P.1(d)]

Inspection Report# : 2012002 *(pdf)*

Significance: G 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: G 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: G 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: G 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: G 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 safetyrelated components. Specifically, there was reasonable doubt as to whether the safety related plant Motor Operated Valves (MOVs) 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: G 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: G 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: G 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: G 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: G 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: Y 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)*
Inspection Report# : 2012011 *(pdf)*

Significance: G 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)*

Barrier Integrity

Significance: G Sep 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct an adverse condition affecing 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 1X10-6. 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: G 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 1X10-6. 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: G 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)*

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

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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