

Oconee 3

1Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Implement the Procedure to Stroke RBS Valves (Section 1R22)

A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4.1 was identified for failure to adequately implement the procedure to stroke reactor building spray (RBS) valves, which resulted in a loss of Reactor Coolant System (RCS) inventory while in Mode 5.

The inspectors determined that the loss of RCS inventory while in Mode 5 was a performance deficiency. The finding was considered to be more than minor because it affected the Configuration Control attribute of the Reactor Safety/Initiating Events Cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown, as well as power operations. The finding was determined to be of very low safety significance. This was based initially on a determination that the event did not meet the loss of control criteria in MC 0609, Appendix G, and also on the Phase 1 screening criteria found in Manual Chapter (MC) 0609, Appendix G, Shutdown Operations Significance Determination Process, Attachment 1, Checklist 2. This finding has a cross-cutting aspect of appropriate coordination of work activities [H.3.b], including incorporating actions to address interdepartmental coordination, the need to keep personnel apprised of work status, the operations impact of work activities, and plant conditions that may affect work activities, as described in the work control component of the human performance cross-cutting area. (Section 1R22)

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Dilution of the RCS While Lining Up for SFP Makeup (Section 4OA3)

A self-revealing NCV of TS 5.4.1 was identified for the failure to properly implement the procedural requirements of OP/3/A/1104/006C, Spent Fuel Pool (SFP) Makeup, which led to an over dilution of the Unit 3 RCS.

The failure to properly implement the procedural requirements of OP/3/A/1104/006C was considered to be a performance deficiency. The finding was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of configuration control; thereby, impacting the associated cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors reviewed this finding in accordance with MC 0609, Significance Determination Process. Although the unintentional dilution was a transient initiator, it did not increase the likelihood of a reactor trip, nor did it increase the likelihood that mitigation equipment or functions will not be available. Consequently, the finding was determined to be of very low safety significance. This finding has a cross-cutting aspect of procedural compliance for a failure to follow procedures [H.4.b] as described in the work practices component of the human performance cross-cutting area. (Section 4OA3)

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Dec 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Loss of Unit 3 SFP Cooling Procedure

A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4.1 was identified for failure to establish

and implement an adequate procedure for loss of the Unit 3 spent fuel pool (SFP) cooling and/or level. More specifically, Abnormal Procedure AP/3/A/1700/035, Loss of SFP Cooling and/or Level, did not reflect the dependency that Unit 3 SFP cooling has on condenser circulating water (CCW) booster pump flow. If it had, the unexpected Unit 3 SFP temperature increase on December 1, 2007, could have been mitigated in a more timely manner and the SFP temperature increase limited to a lower value.

The licensee's failure to adequately establish and implement the procedure for loss of spent fuel pool cooling was a performance deficiency. The finding was considered to be more than minor because it affected the initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The finding was not suitable for SDP evaluation, but was reviewed by NRC management and was determined to be of very low safety significance, because the rate of SFP heatup was low (10 degrees F in four hours), the operators demonstrated the ability to restore CCW booster pump flow within a relatively short time period with respect to the heatup rate, and the Unit 1 and 2 recirculating cooling water (RCW) system was available to be lined up to supply cooling to the Unit 3 SFP cooling heat exchangers per existing plant procedures if needed.

This finding was entered into the licensee's corrective action program. It has a cross-cutting aspect of complete, accurate, and up-to-date procedures (H.2.c), as described in the resources component of the human performance cross-cutting area. (Section 1R20b.(1))

Inspection Report# : [2007005](#) (*pdf*)

Mitigating Systems

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Installation of SSF DG Field Flash Relay Cover (Section 1R19)

A self-revealing finding (FIN) was identified for failure to implement self-checking during Standby Shutdown Facility (SSF) diesel generator (DG) field flash relay cover reinstallation, resulting in a failure of the relay during post maintenance testing and subsequent loss of the electronic governor.

The inspectors determined that the licensee's failure to correctly install the SSF DG field flash relay cover was a performance deficiency. The finding was considered to be more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. The finding was determined to be of very low safety significance (Green), based on the Phase 1 screening criteria found in MC 0609, Appendix A, Attachment 1, in that the additional 15.6 hours of SSF unavailability resulting from the deficiency was less than the TS allowed outage time. Additionally, the Oconee Phase 2 pre-solved table for exposure times of less than three days yields a Green result for the SSF DG. This finding has a cross-cutting aspect of human error prevention techniques [H.4.a], as described in the work practices component of the human performance cross-cutting area. (Section 1R19)

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Sep 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure To Promptly Identify A Condition Adverse To Quality

A self-revealing non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified for failure to take timely corrective action to repair the Standby Shutdown Facility (SSF) air conditioning compressor #2. As a result, the SSF was unnecessarily inoperable for over one week. The inspectors determined that the licensee's failure to promptly repair the SSF air conditioning compressor #2 was a performance deficiency. This finding was more than minor because it affected the availability and reliability attribute of the Mitigating Systems Cornerstone, in that it reduced the reliability of the SSF air conditioning system, which was required to maintain building temperatures for both habitability and electrical equipment operability. The licensee determined that the SSF

remained available as long as one of the two compressors was functional. However, in the event of the SSF being required, reduced capacity and reliability of the air conditioning system would have reduced the likelihood of successful operation of the SSF. The SSF was inoperable from September 4 - 7, 2007, while inadequate repairs were conducted, and again from September 7 - 13, 2007, while no action was taken. The SSF was available for most of this period because compressor #1 was functional. This finding was evaluated using the SDP and was determined to be of very low safety significance because there was no loss of safety function. The inspectors determined this finding was related to the cross cutting aspect of appropriate corrective action being taken in a timely manner [P.1.d], as described in the corrective action component of the problem identification and resolution cross cutting area (Section 1R19).
Inspection Report# : [2007004 \(pdf\)](#)

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Ensure Tagout Compatibility with Plant Conditions

A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4.1 was identified for failure to ensure a high pressure service water (HPSW) system tagout was compatible with overall plant conditions, in that the elevated water storage tank (EWST) was inadvertently isolated from the turbine building and auxiliary building. Consequently, the backup cooling water supply to the high pressure injection pump motors was unknowingly isolated. The inspectors determined that the finding was more than minor because it affected the reliability objective of the Equipment Performance attribute under the Mitigating Systems Cornerstone. The finding was potentially risk significant due to external initiating events (i.e., turbine building flood), because it involved degradation of a function specifically designed to mitigate a flooding event, and the loss of this system during a flooding event would degrade both trains of high pressure injection. The licensee performed a plant specific risk assessment to identify core damage sequences of concern. The staff reviewed this risk assessment and concluded that due to the low initiating event frequency and short exposure time, the finding was appropriately characterized as having very low safety significance. The inspectors determined that the cause of the finding was related to the work control aspect of the cross-cutting area of human performance [H.3(b)]. (Section 1R12)

Inspection Report# : [2007003 \(pdf\)](#)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Meet the Minimum Licensed Operator Staffing Requirements as required by 10 CFR 50.54(m)(2)(i)

The inspectors identified an non-cited violation (NCV) of 10 CFR 50.54 Conditions of a license, for failing to meet the minimum licensed operator staffing requirements as stated in 10 CFR 50.54(m)(2)(i). Between March 2003 and February 2007, seven Senior Reactor Operators (SROs) who had not satisfied all the requalification requirements stood licensed required positions which resulted in the staffing requirements of 10 CFR 50.54(m)(2)(i) not being met. This issue was entered into the licensee's corrective actions program and the extent of condition was properly assessed. This finding is more than minor because it is associated with the configuration control and equipment performance attributes of the Mitigating Systems Cornerstone and adversely affects the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events. Because this finding was not suitable for SDP evaluation, it was reviewed by NRC management and determined to be of very low safety significance (Green). The finding is of very low safety significance because these SROs had not made errors related to qualifications while performing their licensed duties and had successfully completed other aspects of the requalification program, such as the biennial written examination and routine testing conducted throughout the requalification training period. (Section 1R11.2)

Inspection Report# : [2007003 \(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Adequate Procedures for Containment Closure Following a Loss of Decay Heat Removal Event

The inspectors identified an NCV of TS 5.4.1 for the failure to establish and implement adequate procedures for containment closure following a potential loss of decay heat removal (LDHR) event. More specifically, existing procedures did not adequately address control of vehicles blocking the equipment hatch opening, as was the case on October 27, 2007.

The licensee's failure to implement adequate procedures to close the equipment hatch in the event of a LDHR was considered to be a performance deficiency. The finding was determined to be more than minor as it was associated with the barrier integrity cornerstone attribute of procedure quality, thereby impacting the associated cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors reviewed this finding in accordance with IMC 0609, Appendix G, Shutdown Operations Significance Determination Process, Attachment 1, Checklist 3. This finding did not meet the criteria in the checklist for requiring a Phase 2 or 3 analysis, and was therefore determined to be of very low safety significance.

This finding was entered into the licensee's corrective action program. It has a cross-cutting aspect of complete, accurate, and up-to-date procedures (H.2.c), as described in the resources component of the human performance cross-cutting area. (Section 1R20b.(2))

Inspection Report# : [2007005](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to conduct adequate QA activities to ensure waste shipments are characterized in accordance with 10 CFR 61.55

The inspectors identified a NCV of 10 CFR 20 Appendix G, Section III.A.3 for failure to conduct adequate Quality Assurance activities to ensure compliance with the waste characterization requirements of 10 CFR 61.55. Specifically, the licensee failed to properly evaluate the significance of changes between calendar year (CY) 2004 and CY 2005 for 10 CFR Part 61.55 carbon-14 (C-14) analysis results associated with primary coolant filter waste stream samples. The identified changes in the C-14 isotopic abundance and derived scaling factors for primary filters in CY 2005 could have resulted in the improper classification of radioactive waste shipped to a licensed burial site for final disposal. The licensee has entered this finding into their corrective action program for resolution under Problem Investigation Process report (PIP) O-07-02811. This example is more than minor because it adversely affects the program and process attribute of the Public Radiation Safety cornerstone, in that it involves an occurrence in the licensee's radioactive material transportation program that is contrary to NRC regulations. The finding was determined to be of low safety significance because the waste classification of primary filter shipments sent for disposal using the CY 2005 data was not changed by the differences in C-14 isotopic abundance that were identified. The cause of this finding is related to the self/independent assessment aspect of the cross-cutting area of Problem Identification and Resolution [P.3(a)]. (Section 2PS2)

Inspection Report# : [2007003](#) (*pdf*)

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 Jul 27, 2007

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

The inspectors concluded that, in general, problems were properly identified, evaluated, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution; however, several minor plant material condition deficiencies were identified during plant system walkdowns that had gone undetected by licensee personnel. The licensee maintained a low threshold for identifying problems as evidenced by the continued large number of Problem Investigation Process reports (PIP) entered annually into the CAP.

Generally, the licensee properly prioritized issues and examined issues; although several minor problems were noted where lower significance issues were mis-categorized or the investigations lacked thoroughness. Formal root cause evaluations for significant problems were generally thorough and detailed. Corrective actions specified for problems were generally adequate; although, several minor problems were noted where corrective actions were not complete or not comprehensive. Audits and self-assessments were effective in identifying deficiencies in the CAP. Personnel at the site felt free to raise safety concerns to management and to resolve issues through the CAP.

Inspection Report# : [2007008](#) (*pdf*)

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