

Oconee 1

3Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Detect Non-Conforming Parts during Receipt Inspections

A NCV of 10CFR50.55a(g)(4) and 10CFR50, Appendix B, Criterion VII was identified by the inspectors, in that measures taken to preclude the installation of non-conforming replacement parts and the ability to evaluate the suitability of replacement during the Quality Assurance (QA) receipt inspection process were not adequate. Specifically, this was identified for inadequate QA review during receipt inspections that resulted in the licensee installing one non-conforming Control Rod Drive Mechanisms (CRDM) (Split Nut) Flange Ring on Unit 2, and discovering, prior to the installation in Unit 3, 68 CRDMs and 552 CRDM Hold Down Bolts that did not meet the design and procurement specifications. This finding was more than minor because non-conforming material was actually installed in Unit 2. However, it was determined to be of very low safety significance because there was not a loss of system function. (Section 40A5.1C)

Inspection Report# : [2003003\(pdf\)](#)

Mitigating Systems

Significance:  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to follow a procedure required by TS 5.4.1, resulting in multiple reactor operators/senior reactor operators failing to properly reactivate their licenses

The inspectors identified a non-cited violation of Technical Specification 5.4.1(a) for failure to follow Operation Management Procedure 1-12, "Maintenance of Licensed Operator, Shift Technical Advisor, and Non-licensed Operator Qualifications," resulting in multiple reactor operators/ senior reactor operators failing to properly reactivate their licenses. This finding is greater than minor because it affected the Mitigating System Cornerstone human performance attribute to ensure that licensed operators are available, reliable, and capable to respond to initiating events to prevent undesirable consequences. The finding was evaluated using the Operator Requalification Human Performance SDP and was determined to be of very low safety significance. Based on more than 20 percent of the reactivated operators failed to meet the requirements as defined in procedure OMP 1-12, the issue was a Green finding. (Section 40A5.6)

Inspection Report# : [2003004\(pdf\)](#)

Significance: TBD Jul 31, 2003

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Promptly Identify and Correct Insufficient SSF Pressurizer Heater Capacity

As initially discussed in Unresolved Item (URI) 05000269,270,287/2002 006-01, this apparent violation concerns

pressurizer ambient heat losses in all three Oconee Units exceeding the pressurizer heater capacity of those heaters powered from the standby shutdown facility (SSF). Upon recognizing this long-standing problem, the licensee declared the SSF auxiliary service water function (i.e., removal of reactor decay heat via the steam generators) inoperable on March 7, 2002. Using the significance determination process (SDP), this issue was preliminarily determined to be White (i.e., an issue with some increased importance to safety, which may require additional NRC inspection). This issue appears to have a low to moderate safety significance because of the importance of the SSF powered pressurizer heaters to maintain a pressurizer steam bubble during events where the SSF is used to achieve safe shutdown. Specifically, without a steam bubble to maintain primary system pressure, reactor coolant system (RCS) subcooling would be jeopardized, and single phase RCS natural circulation would be interrupted due to voiding in the hot leg. Decay heat would then challenge the pressurizer safety relief valves, and a failure of one of these valves to reseal would lead to core damage since the SSF standby makeup pump is of insufficient capacity to recover the resultant loss in RCS inventory.

Inspection Report# : [2003011\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify the SSF Degraded Grommets as a Deficient Condition in the PIP Corrective Action Program

A non-cited violation (NCV) of 10CFR50, Appendix B, Criterion XVI, Corrective Action, was identified by the inspectors for failure to promptly identify the degraded standby shutdown facility (SSF) diesel cooling water seals in the problem investigation process (PIP) program. This finding was considered to be more than minor based on the fact that subsequent analysis of the grommets noted significant degradation and this analysis would likely not have been performed without initiation of the PIP. Therefore, if the cause of the degradation was left uncorrected, the mitigation systems cornerstone objective of ensuring the continued reliability of equipment needed to respond to initiating events would be affected. In addition, continued degradation of the grommets would become a more significant safety concern. This issue was considered to be of low safety significance (Green) because the grommets were replaced during the SSF diesel overhaul before they failed in service. (Section 1R12.2)

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Sufficient Records (logs) to Furnish Evidence of Activities Affecting Quality (TS LCOs)

A NCV of Technical Specification (TS) 5.4.1 and 10CFR50, Appendix B, Criterion XVII Quality Assurance Records, was identified by the inspectors for failure to maintain sufficient records [logs] to furnish evidence of activities affecting quality [TS Limiting Conditions for Operation (LCOs)]. Specifically, operator logs provided insufficient data to reconstruct the activities related to the June 22, 2003, Unit 1 Engineered Safeguards (ES) power supply failure, which affected the Engineered Safeguards Protection System (ESPS) Digital Automatic Actuation Logic Channels 2, 4, 6, and 8. The ESPS automatic initiation of ES functions to mitigate accident conditions is assumed in the accident analysis and is required to ensure that consequences of analyzed events do not exceed the accident analysis predictions. The failure to adequately document TS LCO entry and action times for the failed automatic ES actuation circuitry was considered to be more than minor because it impacted the operators' ability to accurately implement the TS LCO action statements, and if left uncorrected, this type of improper documentation could become a more significant safety concern. The finding was considered to be of very low safety significance based on the fact that the ES power supply was returned to service before any LCO condition would have required the unit to be in Mode 3. (Section 1R14b.(1))

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare ES Configured Components Inoperable per TS

A NCV of TS 3.3.7 Condition A , Engineered Safeguards Protection System (ESPS) Digital Automatic Actuation Logic Channels, was identified by the inspectors when it was discovered that the licensee failed to declare a number of ES configured system components inoperable following the loss of ESPS digital channels 2, 4, 6, and 8. The ESPS automatic initiation of ES functions to mitigate accident conditions is assumed in the accident analysis and is required to ensure that consequences of analyzed events do not exceed the accident analysis predictions. Consequently, this issue is more than minor, in that by not recognizing the importance of the lost automatic ES initiation function and taking the compensatory actions of TS 3.3.7, the mitigating systems cornerstone objective of ensuring the continued reliability of equipment needed to respond to initiating events was affected. However, this issue was determined to be of very low safety significance, based on the fact that there was no loss of function of the Low Pressure Service Water system or the Keowee Hydro Units resulting from the loss of ESPS Digital Automatic Actuation Logic Channels 2, 4, 6, and 8. Additionally, the ES power supplies were restored and digital channels returned to service prior to exceeding any TS allowed outage times for the affected components. (Section 1R14b.(2))

Inspection Report# : [2003003\(pdf\)](#)

Significance:  Apr 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Combustible Material in the KHU Complex

A non-cited violation of Paragraph 3.D of the Oconee Operating License was identified for failure to implement and maintain all provisions of the approved fire protection plan which includes Nuclear System Directive (NSD) 313, Control of Flammable and Combustible Material. The temporary storage of wooden crates at the KHU complex was not evaluated and approved by the fire protection engineer as required by NSD 313. Subsequent evaluation determined increase in fire loading necessitated a fire watch tour be performed every six hours. This issue was determined to be of very low safety significance (Green) as it did not result in the impairment or degradation of fire protection features or defense in depth for safe shutdown. (Section 1R05)

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Dec 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Timely/Effective Corrective Actions When Dispositioning a Component with Identified ASME Code Deficiencies and Non-Compliances

The inspectors identified a finding for the licensee's failure to perform timely/effective corrective actions when dispositioning a component with identified ASME Code deficiencies and non-compliances. A non-cited violation of 10 CFR50, Appendix B, Criterion XVI, Corrective Actions, was identified with respect to the failure to perform timely/effective corrective actions. The violation is greater than minor because it is associated with the mitigating system cornerstone attributes and affected the cornerstone objective to ensure availability, reliability, and capability of the pressure boundary portion of a component used during Unit 1 design basis events. This finding was considered to be of very low safety significance because it was concluded that the component (1B condenser circulating water pump) could perform its intended pressure boundary safety function and that the issue could be resolved with NRC approval of relief requests. (Section 1R08.2)

Inspection Report# : [2002005\(pdf\)](#)

Significance:  Dec 31, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Improper Mode Change with Inoperable Atmospheric Dump Valve

An inadequately installed chain operator on atmospheric dump valve (ADV) block bypass valve 1MS-163 resulted in not having the ADVs available for both steam generators on Unit 1 operable during a mode change. A non-cited violation was identified for conducting a mode change without having the ADVs operable, as prescribed in Technical Specification (TS) 3.0.4 and TS 3.7.4. The violation affected the objective of the mitigating system cornerstone to protect against external factors (i.e., tornado) and was therefore, more than minor. This self-revealing finding was determined to be of very low significance due to the short exposure time and the limited initiating events affected by the loss of the ADV. (Section 1R12.1)

Inspection Report# : [2002005\(pdf\)](#)

Significance:  Dec 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify and Correct the Turbine Driven Emergency Feedwater Lube Oil Sump Water Intrusion adverse Condition

The licensee failed to correct a water intrusion problem following identification in 1998, 1999, and 2000 that water was entering the Units 1 and 2 turbine driven emergency feedwater (EFW) pump lube oil sumps. A non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, requirements was identified for failure to identify the source of the water intrusion, failure to identify the rate of water intrusion, and failure to correct the condition adverse to quality. Water in the turbine driven EFW pump lube oil sumps had a credible affect on the operability, availability, reliability and function of the TDEFW mitigation system and was therefore, more than minor. This finding was determined to be of very low safety significance due to the multiple trains of equipment capable of performing secondary side heat removal not affected by the performance deficiency. This included two trains of motor driven EFW pumps per unit, potential cross connect of EFW between units, and the standby shutdown facility. (Section 1R12.2)

Inspection Report# : [2002005\(pdf\)](#)

Significance:  Dec 31, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Perform Surveillance within the Required Periodicity

An inadequacy in the licensee's work planning program resulted in a missed Technical Specification (TS) required surveillance test involving the Keowee Hydro Station overhead power path. A non-cited violation of TS surveillance requirements (SR) 3.3.19.1, Channel Functional Test for Degraded Grid Voltage Protection Actuation Logic Channels, SR 3.8.1.15, 230kV Circuit Breaker Actuation on Switchyard Isolation, and TS 5.5.18, Keowee Hydro Unit Commercial Power Generation Testing Program, was identified when it was discovered that PT/0/A/610/022, Keowee Over Frequency Protection Functional Test, was not performed within the required TS SR frequency. This violation is more than minor because it affected the mitigating system cornerstone objective of equipment reliability, in that, a complex series of tests for the emergency power supply were not performed within the specified frequency. This self-revealing finding was determined to be of very low safety significance based on the fact that there was no unavailability of the Keowee units resulting from the missed surveillances. (Section 1R22.2)

Inspection Report# : [2002005\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Jul 11, 2003

Identified By: NRC

Item Type: FIN Finding

Problem Identification and Resolution Inspection

The team identified that the licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution. The licensee maintained a low threshold for identifying problems as evidenced by the continued large number of Problem Investigation Process reports (PIPs) entered annually into the CAP. The inspector's independent review did not identify significant adverse conditions which were not in the CAP for resolution.

Evaluation and prioritization of problems was generally effective; although, one example was noted where an evaluation did not thoroughly examine the potential for generic implications. Corrective actions specified for problems were generally adequate; although, several examples were noted where corrective actions were not complete or not comprehensive. Audits and self-assessments continued to identify issues; however, some examples were noted where the issues were not correctly classified for resolution. Previous non-compliance issues documented as non-cited violations were properly tracked and resolved via the CAP. Personnel at the site felt free to raise safety concerns to management and to resolve issues via the CAP.

Inspection Report# : [2003009\(pdf\)](#)

Last modified : December 01, 2003