

Oconee 2

4Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Management Associated With the Unit 2 Electrical Generator Rotor Lifts

Green. An NRC-identified Green non-cited violation (NCV) of 10 CFR 50.65(a)(4) was identified for the licensee's failure to adequately develop and effectively implement risk mitigation actions associated with lifting the Unit 2 main generator rotor. The licensee failed to establish and adhere to lift height restrictions to protect the Unit 1 and Unit 2 main feeder buses from damage in the event the rotor was dropped. The issue was entered into the licensee's corrective action program as PIPs O-10-2477 and O-10-2830. Corrective actions taken included enhancing the Critical Activity and Complex Lift Plans to provide additional guidance and mitigating actions as well as assigning increased oversight for future lifts.

The performance deficiency was more than minor because it affected the Human Performance attribute and adversely impacted the Initiating Events cornerstone objective in that the risk management strategies did not minimize the consequence of a rotor drop during the Unit 2 online lifts and were not effectively implemented during the Unit 2 outage lifts. The inspectors completed a Phase 1 screening using Inspection Manual Chapter 0609, Appendix K, Maintenance Risk Assessment and Risk Management Significance Determination Process, and determined that the finding was of very low safety significance (Green) because the Incremental Core Damage Probability increase was less than 1E-6. The finding directly involved the cross-cutting area of Human Performance under the "Work Activity Coordination" aspect of the "Work Control" component in that the licensee failed to appropriately control work activities by incorporating risk insight. [H.3(a)] (Section 1R13)

Inspection Report# : [2010003](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately protect risk significant and safety-related systems, structures or components (SSCs) from cold weather conditions.

An NRC-identified non-cited violation (NCV) of TS 5.4.1.a was identified for the licensee's failure to implement procedures to ensure equipment associated with cold weather protection of risk significant and safety-related systems, structures or components (SSC's) was in-service and functional prior to the onset of cold weather. This issue was entered into the licensee's corrective action program as PIP O-10-9308. Corrective actions taken include expediting maintenance on equipment determined to be non-functional, assigning an individual as a cold weather protection point-of-contact and revising/developing procedures to ensure similar deficiencies do not occur in the future.

The licensee's failure implement cold weather procedures was a performance deficiency (PD). The PD was more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern in that safety-related or risk significant SSC's could be adversely affected by cold ambient temperatures. The finding was of very low safety significance (Green) because the finding did not result in the likelihood of a reactor trip at the same time that mitigation equipment or associated functions would not be available. The finding involved the cross-cutting area of Human Performance under the Management Oversight aspect of the Work Practices component in that the

licensee failed to provide the appropriate management oversight to ensure the activities required to prepare the plant for cold weather conditions were completed prior to the onset of cold weather. [H.4.c] (Section 1R01)

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: FIN Finding

Failure to prescribe procedures for inspecting the east penetration room floor seals

An NRC-identified finding was identified for the licensee's failure to verify the operability of the East Penetration Room (EPR) expansion joint floor seals for all three units since 2006. Selected Licensee Commitment (SLC) Surveillance Requirement (SR) 16.9.11a.7 required the licensee to verify the operability of auxiliary building (AB) floor seals every eighteen months.

The licensee's failure to ensure that the required EPR expansion joint floor seal inspections were performed as required by SLC SR 16.9.11a.7 was a PD. The PD was more than minor because, if left uncorrected, it would have the potential to become a more significant safety concern in that the floor seals could further degrade and affect the function of the flood

outlet devices (FOD) to protect safety-related related equipment from flooding after a HELB in the EPR. The inspectors determined that the finding was of very low safety significance (Green) because the degradation the EPR floor seals did not result in the loss of operability or functionality of equipment they were designed to protect. The cause of this finding was directly related to the "complete, accurate, and up-to-date design documentation, procedures and work packages" aspect of the Resources component of the Human Performance cross-cutting area, in that, procedures and work packages to perform the surveillance were not updated following the FOD modification. [H.2(c)] (Section 1R06)

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to install structural rebar as required by instructions and drawings.

An NRC-identified non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for the licensee's failure to adhere to drawings and instructions during the installation of rebar in QA-1 structures prior to concrete placement. The inspectors identified two examples where rebar installation did not meet the concrete coverage requirements specified in ACI Code 117-06. This violation has been entered into the licensee's corrective action program as PIPs O-10-9091 and O-10-9351.

The licensee's failure to follow approved drawings and instructions for construction of QA-1 structures was a PD. The PD was more than minor because, if left uncorrected, insufficient concrete coverage on the rebar could lead to rebar corrosion and challenge the integrity of the QA-1 structures under construction. The finding was of very low safety significance (Green) because the finding did not result in the actual loss of function of the PSW duct bank, the Emergency Condensate Cooling Water pipe, or the PSW Building roof. 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 effectively ensure workers followed procedures and written guidance in the performance of their activities. [H.4(b)] (Section 1R18)

Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly evaluate potentially degraded conditions for potential impact on operability or functionality.

•Green. An NRC-identified Non-cited Violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified for the licensee’s failure to evaluate degraded or nonconforming conditions and perform operability determinations or functionality assessments as prescribed in procedure OMP 2-01, Duties and Responsibilities of On-Shift Operations Personnel. The inspectors determined that the licensee routinely failed to evaluate known conditions adverse to quality documented in work orders and work requests for potential impact on the operability or functionality of systems, structures or components (SSC’s).

The failure to evaluate work orders (WOs) or work requests (WRs) for potentially degraded or nonconforming conditions as required by OMP 2-01 was a performance deficiency (PD). This PD was more than minor because, if left uncorrected it had the potential to lead to a more significant safety concern. The failure to evaluate potential conditions adverse to quality as prescribed in OMP 2-01 could result in the licensee failing to determine that a degraded or nonconforming condition could affect the system’s ability to perform its safety function. The finding was determined to have very low safety significance (Green) because the finding did not represent an actual loss of safety function of a system or train. This finding has a cross cutting aspect in the area of Human Performance associated with the component of Work Practices because licensee management failed to define and effectively communicate expectations regarding procedural compliance such that personnel follow procedures [H.4(b)].

Inspection Report# : [2010009](#) (pdf)

Significance:  Dec 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to adequately monitor performance of the standby shutdown facility HVAC system as required by 10 CFR 50.65

•Green. An NRC-identified non-cited violation of 10 CFR 50.65(a)(2), was identified for failure to demonstrate that Standby Shutdown Facility (SSF) Ventilation system performance was being effectively controlled through the preventive maintenance (PM) program, or place the system in 10 CFR 50.65(a)(1) status due to SSF Heating Ventilation and Air Conditioning (HVAC) system maintenance rule functional failures beyond established performance criteria.

The failure to perform adequate performance or condition monitoring on the SSF HVAC system was a performance deficiency (PD). This PD was 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 licensee failed to demonstrate effective control of the SSF HVAC system through appropriate preventive maintenance. The finding was determined to have very low safety significance (Green) because it did not result in the actual loss of safety function of one or more non-Technical Specification equipment trains, designated as risk-significant per 10CFR50.65, for greater than 24 hours. The cause of the finding was directly related to the human performance crosscutting aspect associated with resources, for the licensee not ensuring their maintenance rule procedures were adequate to provide clear and accurate directions on how to classify functional failures. [H.2(c)].

Inspection Report# : [2010009](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

EQ components not installed in the as-qualified configuration

A NRC-identified non-cited violation was identified for the licensee’s failure to comply with 10 CFR 50.49(f) in that Rosemount transmitters, Limitorque valve actuators, and electrical penetration assemblies (EPAs), each an item of electric equipment important to safety, were found installed in a configuration other than the tested configuration and the licensee did not establish the qualification of the installed configuration.

The failure to comply with the requirements of 10 CFR 50.49(f) was a performance deficiency. The performance deficiency was more than minor in that if left uncorrected it could have adversely affected indication required by operators to diagnose and respond to an event or resulted in unexpected equipment response. The inspectors determined that a Phase 2 evaluation was required for the Rosemount transmitters with plastic shipping plugs installed because of a potential loss of safety function of the Low Pressure Injection system. The inspectors performed a Phase 2 and concluded that the finding was of very low safety significance (Green) because the ability to achieve hot

shutdown was not affected. The other three conditions screened as Green in Phase 1 because the finding did not result in the actual loss of function of the transmitters with improperly torqued covers, the Limitorque actuators, or EPAs. The finding involved the cross-cutting area of Human Performance under the Procedures aspect of the Resources component in that the licensee failed to develop complete and accurate procedures and work packages for the installation and periodic maintenance of Rosemount transmitters. (H.2.c) (Section 40A2.2)

Inspection Report# : [2010004](#) (pdf)

Significance:  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Unqualified electrical penetration assemblies

An NRC-identified non-cited violation of 10 CFR 50.49(l) was identified when the licensee did not follow the requirements for replacing components within EPAs when existing components qualified under the Division of Operating Reactors, Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors (DOR Guidelines), dated November 1979, were combined with replacement components qualified to current standards. The outboard Viking EPA terminal box and associated terminal blocks, not qualified under current standards, were left in 86 EPAs that had been upgraded and made available for use in safety-related or environmentally-qualified applications.

The failure to replace or to justify reasons to the contrary for not replacing the Viking EPA outboard terminal box and terminal blocks was a performance deficiency. The performance deficiency was more than minor because if left uncorrected, the licensee could have used the non 10 CFR 50.49 qualified terminal blocks as an electrical pathway for environmentally qualified or safety related loads. The inspectors completed a Phase 1 screening and determined that the finding was of very low safety significance (Green) because the finding did not result in the actual loss of function of the equipment receiving signals or power supplied through the modified EPAs. The finding directly involved the cross-cutting area of Human Performance under the Proper Maintenance Practices aspect of the Resources component in that the terminal boxes and associated terminal blocks which were not qualified under current standards were left in EPAs that had been upgraded and made available for use in safety-related or environmentally-qualified applications. (H.2.a)

Inspection Report# : [2010004](#) (pdf)

Significance:  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify and Correct Fire Brigade Performance Weaknesses

A Green NRC-identified NCV of Condition 3.D of Facility Operating Licenses DPR-38 (Unit 1), DPR-47 (Unit 2) and DPR-55 (Unit 3) was identified for the licensee's failure to identify, critique, and develop corrective actions for fire brigade performance weaknesses during a fire drill as required by NSD 112, "Fire Brigade Organization, Training and Responsibilities." This violation has been entered into the corrective action program as PIP O-10-1247.

The licensee's failure to identify, critique, and develop corrective actions for fire brigade performance weaknesses during a fire drill as required by NSD 112 was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective in that fire brigade performance weaknesses may delay fire brigade response allowing a fire to propagate leading to a more significant event. This finding was determined to be of very low safety significance because the condition of the automatic fire detection and suppression systems was satisfactory and the performance weaknesses would not have affected the ability to achieve safe shutdown. This finding directly involved the cross-cutting area of Human Performance, component of Work Practices, and aspect of personnel follow procedures in that the requirements of NSD 112; Section 112.6, were not met (H.4(b)). (Section 1R05)

Inspection Report# : [2010002](#) (pdf)

Significance: **W** Mar 30, 2010

Identified By: NRC

Item Type: VIO Violation

Failure to promptly identify and correct an adverse condition affecting operability of the Unit 2 and Unit 3 standby shutdown facility

A NRC-identified White 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 associated with a degraded condition on Unit 2 and Unit 3 Standby Shutdown Facility (SSF) Reactor Coolant Makeup (RCM) subsystem letdown lines. This violation has been entered into the corrective action program as PIP O-10-1213.

The licensee's failure to promptly identify and correct the degraded condition of the Unit 2 and Unit 3 SSF RCM letdown lines as required by 10 CFR 50, Appendix B, Criterion XVI was a performance deficiency. The performance deficiency was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance and adversely impacted the cornerstone objective because the degraded condition had the potential to affect reactor coolant system inventory control during an SSF event. This finding was characterized as a White finding of low to moderate significance with regard to safety. This finding does not present an immediate safety concern because the filters have been removed from the SSF RCM subsystem letdown lines on all three units. This finding directly involved the cross-cutting area of Human Performance under the Conservative Assumptions and Safe Actions aspect of the "Decision Making" component (H.1(b)). (Section 4OA5.b.1)

Inspection Report# : [2010007](#) (*pdf*)

Inspection Report# : [2010008](#) (*pdf*)

Significance: **SL-III** Mar 30, 2010

Identified By: NRC

Item Type: VIO Violation

Materially inaccurate information provided to NRC regarding SSF event mitigation capability

A licensee-identified SL-III violation of 10 CFR 50.9(a) was identified when the licensee determined that information contained in the "Oconee Nuclear Station SSF RC Letdown Action Plan" was inaccurate. This information was material to NRC because it was used, in part, as the basis for determining whether the licensee's response to the degraded condition was adequate and whether additional compensatory actions or NRC review would be necessary. This violation has been entered into the corrective action program as PIP O-10-0561.

The failure to provide complete and accurate information impacted the regulatory process in that the inaccurate information was material to NRC's determination that the licensee's response to the degraded condition was adequate. The severity level of this violation is characterized at Severity Level III in accordance with the NRC Enforcement Policy. Cross-cutting aspects are not assigned to violations being dispositioned through the traditional enforcement process. (Section 4OA5.b.2)

Inspection Report# : [2010007](#) (*pdf*)

Inspection Report# : [2010008](#) (*pdf*)

Significance: **Y** Mar 30, 2010

Identified By: NRC

Item Type: VIO Violation

SSF reactor coolant makeup subsystem inoperable for greater than allowed by technical specifications

A self-revealing Yellow violation of Technical Specification 3.10.1 was identified when the Standby Shutdown Facility (SSF) Reactor Coolant Makeup (RCM) subsystem letdown line failed to pass the required flow. As a result, the SSF RCM subsystem was rendered inoperable for greater than the seven days allowed by technical specifications (TSs). This violation has been entered into the corrective action program as PIP O-09-7536.

The licensee's failure to ensure the SSF RCM subsystem remained operable as required by TSs was a performance deficiency. The performance deficiency 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 letdown line could not perform its design function during an SSF event. This finding was

characterized as a Yellow finding of substantial importance to safety. This finding does not present an immediate safety concern because the filters have been removed from the SSF RCM subsystem letdown lines on all three units. No cross-cutting aspect was identified because the most significant contributor to this finding was not indicative of current licensee performance. (Section 4OA5.b.3)

Inspection Report# : [2010007](#) (*pdf*)

Inspection Report# : [2010008](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Conduct an Adequate Area Radiation Survey of a Room in the Radwaste Facility

Green. A self-revealing non-cited violation (NCV) of 10 CFR 20.1501(a) was identified for the licensee's failure to conduct an adequate area radiation survey to evaluate the magnitude and extent of radiation levels for an area located in the Radwaste Facility. This issue has been entered into the licensee's corrective action program as PIPs O-09-04475 and O-10-01503.

The failure to conduct an adequate area radiation survey to evaluate the magnitude and extent of radiation levels for an area located in the Radwaste Facility is a performance deficiency. This finding is more than minor because it is associated with the Occupational Radiation Safety cornerstone attribute of exposure control and monitoring and it affected the associated cornerstone objective because the failure to conduct an adequate area radiation survey to evaluate the magnitude and extent of radiation levels for an area located in the Radwaste Facility did not ensure the adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The finding was evaluated using the IMC 0609, Appendix C, and was determined to be of very low safety significance. The cause of this finding is related to the cross-cutting aspect of radiological safety in the work control component of Human Performance because the licensee did not conduct an adequate area radiation survey to evaluate the magnitude and extent of radiation levels for an area located in the Radwaste Facility. [H.3(b)] (Section 2RS1)

Inspection Report# : [2010003](#) (*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

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