

Vogle 2

2Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to inspect tube R1C2 of steam generator 2 during the steam generator eddy current examination in 2007

•Green: An NRC identified non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for failure to adhere to steam generator eddy current examination procedures during the 2007 Unit 2 refueling outage. As a result, a tube inspection was missed. The missed tube inspection was completed during a March 2010 inspection and was found to be without significant degradation. The licensee entered the issue into their corrective action program as CR 2010103680.

The inspectors determined that the finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of assuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the failure to adhere to steam generator tube inspection procedures resulted in a missed tube inspection and affected the assurance that barrier integrity was maintained. The finding was determined to be of very low safety significance because subsequent testing of the missed tube in March 2010 did not indicate tube degradation. This finding was determined to not have a cross-cutting aspect associated with it due to the timeframe of the event and that the cause of the event is not indicative of current plant performance. (Section 1R08.4)

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

Mitigating Systems

Significance:  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to verify purchased equipment conformed to design specifications

Green: A self revealing, non-cited violation of 10 CFR Part 50, Appendix B, Criterion VII, Control of Purchased Material, Equipment, and Services, was identified for failure to establish measures to assure that purchased material, equipment, and services conform to the procurement documents. More specifically that safety-related EMAX breaker closing coils were capable of performing their safety related function. All affected EMAX breaker closing coils were replaced with a qualified 90V closing coil capable of continuous duty cycle.

This finding is more than minor because if left uncorrected, the failure to establish measures to assure that purchased material, equipment, and services conform to procurement documents could become a more significant safety concern. Additionally, it impacted the Reactor Safety Cornerstones of Mitigating Systems and Barrier Integrity in that, the failure to establish measures to assure that purchased material, equipment, and services conform to procurement documents to ensure that safety-related breakers are assembled and functionally tested correctly, impacted the design control and equipment performance (availability and reliability) attributes. This finding was determined to be of very low safety significance (Green) because it did not result in a loss of operability or functionality. This finding was determined to not have a cross-cutting aspect associated with it due to the timeframe of the event and that the cause of the event is not indicative of current plant performance. (Section 1R18)

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

Significance: **G** Mar 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Ineffective corrective action renders Unit 2 CCW pump #4 inoperable

A self-revealing non-cited violation (NCV) for failure to meet the requirements of 10 CFR 50, Appendix B, Criterion XVI was identified. Specifically, for ineffective corrective maintenance performed on the Unit 2 Component Cooling Water (CCW) Pump #4. The corrective maintenance actions performed on CCW pump #4 in October 2009 to repair damage due to contact between the throttle bushing and the shaft sleeve on the inboard mechanical seal were ineffective, and consequently, the same damage to the inboard mechanical seal occurred in January 2010 when the pump was again operated. As a result, the Unit 2 CCW pump #4 was rendered inoperable for the second time in three months due to the same mechanical seal issue.

This issue was greater than minor because it was associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency was an equipment performance issue which affected the availability, reliability, and capability of the B train emergency core cooling system (ECCS) to respond to a loss of coolant accident (LOCA). The finding was determined to be of very low safety significance (Green) because the event did not represent in an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. The inspectors determined that the cause of this finding was related to the Corrective Action Program component of the Problem Identification and Resolution cross-cutting area due to less-than-adequate problem evaluation [P.1(c)]. Specifically, the corrective maintenance actions used to resolve the mechanical seal issue on CCW pump #4 were less than adequate. (Section 1R12)

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

Significance: **G** Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Operation of NSCW system with tower return valves in open bypass

•Green. A NRC-identified NCV for failure to enter TS LCO 3.7.8 Condition A as required was identified.

Specifically, the licensee's failure to follow the requirements of TS LCO 3.0.2 and enter TS LCO 3.7.8 Condition A when the NSCW tower return valves are placed in a position other than that required by TS SR 3.7.8.1. The licensee has entered the issue into their corrective action program and began procedure revisions to ensure operation of the NSCW system in accordance with Technical Specifications and the UFSAR at all times.

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is a configuration control error which affected the operability of an entire train of emergency core cooling system equipment, and thus impacts the equipment's automatic function to respond to a loss of coolant accident. The finding was determined to be of very low safety significance (Green) because the event did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specifications and the UFSAR, and does not align itself with any cross-cutting aspect. (Section 4OA5.1)

Inspection Report# : [2009005](#) (*pdf*)

Significance: **G** Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate surveillance procedures for TS SR 3.7.8.2

•Green. A NRC-identified NCV for inadequate surveillance procedures was identified. Specifically, TS SR 3.7.8.2 requires the licensee to periodically verify that each NSCW system automatic valve in the system flow path actuates to the correct position on an actuation signal. The current procedures used to meet the requirements of TS SR 3.7.8.2 do not verify that the tower return header valves actuate to the correct position when demanded during an automatic actuation signal. As a result, the NSCW systems do not currently meet the requirements of TS SR 3.7.8.2. The licensee has entered the issue into their corrective action program and began procedure revisions necessary to support

operation of the NSCW system in accordance with Technical Specifications and the UFSAR at all times.

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is an equipment performance error which affected the reliability of the NSCW systems. The finding was determined to be of very low safety significance (Green) because the finding did not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specifications and the UFSAR, and does not align itself with any cross-cutting aspect. (Section 4OA5.2)

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Human performance error results in manual reactor trip section

•Green. A self-revealing non-cited violation (NCV) of Technical Specification 5.4, Procedures was identified. Specifically, a human performance error associated with inadvertently isolating instrument air to the turbine building, auxiliary building, and control building, resulted in an automatic trip of the B main feed pump and a subsequent manual reactor trip. The licensee immediately restored instrument air and stabilized the plant in Mode 3. The licensee has entered the issue into their corrective action program and is in the process of implementing enhanced human error reduction techniques and improving procedural rigor and compliance throughout the site organization.

This issue is more than minor because it is associated with a cornerstone attribute, and it adversely affected the objective of the Initiating Events cornerstone. Specifically, the performance deficiency is a human performance error which led to a reactor trip and adversely impacted plant stability. The finding was determined to be of very low safety significance (Green) because the event did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that the cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area. [H.4(c)] Specifically, due to less-than-adequate supervisory and management oversight of the work activity i.e., no in-field supervisory oversight for ‘first-time’ performers and inadequate pre-job brief. (Section 4OA3.2)

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly maintain the approved fire protection program with regard to the relocation of the plant the fire alarm annunciation signal outside of the MCRs.

•Green. NRC identified a NCV of Vogtle Nuclear Plant Units 1 & 2 Operating License Condition 2.G, “Fire Protection,” for failure to properly maintain the NRC-approved fire protection program with regard to the location of the fire alarm computer audible and visual annunciation notification signal. Specifically, the licensee had implemented a plant change, in December 2006, for the fire alarm computer which relocated the fire alarm computer annunciation signal outside the continuously manned main control room to a clearance and tagging office which was not continuously manned. The plant change could have resulted in a delay of up to 2 minutes before the alarm would have been relayed to the main control room for actions to dispatch the fire brigade and initiate safe shutdown actions.

The finding is more than minor because it is associated with the reactor safety, mitigating systems, cornerstone attribute of protection against external factors, i.e. fire, and it affected the objective of ensuring reliability and capability of systems (i.e., fire detection) that respond to initiating events. The finding was determined to be of very low safety significance (Green) in a Significance Determination Process Phase 1 analysis because the two minute delay had only minimum impact on the feasibility or reliability of the time critical operator actions and fire brigade

performance in response to a fire. This violation was entered into the licensee's corrective action program as Condition Report 2007110797. No cross cutting issue was identified, because the finding is not indicative of current plant performance. (Section 40A5.3).

Inspection Report# : [2009005](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Human performance error renders 2BEDG inoperable

A self-revealing non-cited violation (NCV) was identified for a human performance error associated with inadvertently racking out the 2B emergency diesel generator (EDG) output breaker. The system operator racked out the incorrect breaker while performing lockout 2-DT-09-1217-00289 on the Auxiliary Component Cooling Water (ACCW) system. As a result, the 2B EDG was temporarily rendered inoperable. Licensee immediately restored the 2B EDG to operable status by returning the output breaker to the 'connect' position. The licensee entered the issue into their corrective action program.

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is a human performance error which affected the availability, reliability, and capability of the B train emergency core cooling system to respond to a loss of coolant accident during a loss of off-site power. The finding was determined to be of very low safety significance (Green) because the event did not represent an actual loss of safety function of a single train for greater than its Technical Specification (TS) allowed outage time. The inspectors determined that the cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area due to less-than-adequate human error prevention techniques [H.4(a)]. Specifically, peer checking techniques were less than adequate.

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Human performance error renders NSCW pump #5 inoperable

A self-revealing non-cited violation (NCV) was identified for a human performance error associated with failure of an operator to verify that the discharge valve on the Nuclear Service Cooling Water (NSCW) pump #5 went closed after securing the pump as required by the operating procedure. As a result, NSCW pump #5 was rendered inoperable for several hours. Licensee immediately effected repairs to the discharge valve MOV and returned the NSCW pump #5 to operable status.

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is a human performance error which affected the availability, reliability, and capability of the A train emergency core cooling system to respond to a loss of coolant accident. The finding was determined to be of very low safety significance (Green) because the event did not represent an actual loss of safety function of a single train for greater than its TS allowed outage time. The inspectors determined that the cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area due to less-than-adequate human error prevention techniques [H.4(a)]. Specifically, self checking techniques were less than adequate.

Inspection Report# : [2009004](#) (pdf)

Barrier Integrity

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

MOV program procedures were inadequate with regard to periodicity of preventive maintenance activities for stem lubrication

A self-revealing NCV of 10 CFR 50, Appendix B, Criterion V,

“Instructions, Procedures, and Drawings,” was identified. Specifically, Vogtle Electric Generating Plant’s (VEGP) MOV preventative maintenance (PM) procedures lacked specific instructions that provided an adequate frequency for performing valve stem lubrication, which resulted in test failures of safety-related MOVs and affected the reliability of the MOVs’ safety functions. The licensee removed the hardened grease, re-lubricated and successfully tested the MOVs. They have entered the issue into their corrective action program and are in the process of revising existing maintenance procedures to change the PM frequency from 54 months to 36 months for long stem, safety-related MOV stem lubrication.

The finding was more than minor because if left uncorrected other safety related MOVs could be affected by the inadequate stem lubrication PM frequencies. The finding is associated with the configuration control attribute of the Barrier Integrity (BI) Cornerstone and affected the cornerstone objective of providing reasonable assurance that physical design barriers (e.g., containment) protect the public from radionuclide releases caused by accidents or events. Specifically, Containment Spray (CS) pump sump suction isolation MOVs experienced test failures and were declared inoperable, which required operability evaluations, thereby challenging their reliability and capability to perform their safety function. Using the Phase 1 worksheet in Attachment 4 of Manual Chapter 0609, “Significance Determination Process,” the finding affected the BI cornerstone and was of very low safety significance (Green) because it did not represent an actual open pathway in the physical integrity of reactor containment. Although the CS sump suction MOV’s condition affected the mitigating system cornerstone, the finding analysis was assigned to the BI cornerstone because it best reflected the dominant risk of the finding. This finding has a cross-cutting aspect in the area of PI&R, Corrective Action Program, because VEGP did not thoroughly evaluate problems such that the resolutions addressed the causes and extent of condition [P.1(c)]. Specifically, VEGP failed to thoroughly evaluate previous conditions of degraded and hardened grease on safety-related valves, such that the extent of the condition was considered and the cause was resolved.

Inspection Report# : [2009004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

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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