

Vogtle 1

2Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Correctly Implement a Condensate and Feedwater Systems Procedure for Startup

Green: A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4.1.a, "Procedures," was identified for the licensee's failure to implement system operating procedure (SOP) 13615-1, "Condensate and Feedwater Systems," Version 84. Specifically, on July 30, 2014, the licensee conducted a power increase from Mode 2 (approximately 3 percent reactor power) to Mode 1 (approximately 8 percent reactor power) with main condenser hotwell level control in "manual" versus "automatic" as directed by procedure. This resulted in a main feedwater transient and a subsequent reactor shutdown. The licensee initiated an incident response team and entered this event into their corrective action program as condition report (CR) 847734. Additional corrective actions included revising the SOP to include specific instructions for the control of main condenser hotwell level with corresponding number of operating condensate pumps.

The performance deficiency was more than minor because it was associated with the human performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the performance deficiency was associated with a human error during implementation of SOP 13615-1, resulting in a main feedwater transient event (i.e. loss of condensate pump net positive suction head (NPSH) in the condenser hotwell resulting in lowering steam generator water levels), that subsequently upset plant stability. The inspectors evaluated the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. The finding screened as Green because it did not cause a reactor trip. The inspectors determined the finding had a cross-cutting aspect of "procedure adherence" in the human performance area because the unit operator did not implement SOP 13615-1 procedure Step 4.1.1.5, which required the UO to 'verify' condenser hotwell control, 1LIC-4415, is in 'auto' maintaining normal level. [H.8] (Section 1R11)

Inspection Report# : [2014004](#) (*pdf*)

Significance: G Sep 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Correctly Implement a Chemical and Volume Control System Procedure for Reactor Water Makeup

Green: A self-revealing NCV of TS 5.4.1.a, "Procedures," was identified for the licensee's failure to implement SOP 13009-1, "CVCS Reactor Makeup Control System," Version 50.1. Specifically, on July 9, 2014, the licensee conducted a blended makeup to the volume control tank (VCT) at a boric acid concentration lower than what the procedure required, which resulted in an inadvertent boron dilution of the reactor coolant system (RCS), and caused a subsequent power excursion. Upon recognition, the unit operator took immediate actions to reduce power to an acceptable level. The licensee entered this issue into their corrective action program as 837899.

The performance deficiency was more than minor because it was associated with the human performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the performance deficiency was associated with a human error during implementation of SOP 13009-1, resulting in a reactivity event (i.e. inadvertent boron dilution), that subsequently upset plant stability. The inspectors evaluated the finding using IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” issued June 19, 2012. The finding screened as Green because it did not cause a reactor trip. The inspectors determined the finding had a cross-cutting aspect of “avoid complacency” in the human performance area because the reactor operator did not implement error reduction tools, such as ‘STAR’ (Stop, Think, Act, Review), as self-check to ensure that work activities were performed safely. [H.12]

Inspection Report# : [2014004](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Identify and Correct Degraded Foreign Material Cover Plates for the NSCW Pump Wells

An NRC-identified, Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” was identified for the licensee’s failure to identify and correct conditions adverse to quality associated with the cover plates for the nuclear service cooling water (NSCW) system pumps’ shaft well access openings. Specifically, the licensee failed to identify degraded conditions on the NSCW pump well cover plates (e.g. openings from uncovered holes and degraded periphery) that could result in foreign material (FM) entering the pumps’ well and impact cooling water flow to safety related heat exchangers. The licensee entered the issue into their corrective action program (CAP) under CR10033287, CR10085803 and CR10091171, installed temporary FM exclusion covers, and removed debris near the pump cover wells.

The finding was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the openings in the degraded pump well covers could allow FM to enter the NSCW system and adversely affect cooling water flow to essential component coolers. The finding was evaluated using the mitigating systems cornerstone column of Attachment 4 and Exhibit 2 of Appendix A to Inspection Manual Chapter 0609, “Significance Determination Process,” (SDP) dated April 29, 2015. The finding was of very low safety significance (i.e. Green) because the inspectors answered “No” to all of the screening questions in the exhibit. The inspectors determined the finding had a cross-cutting aspect of “Evaluation” in the Problem Identification and Resolution (PI&R) area because the organization did not thoroughly evaluate the NSCW debris-blocking event of the 1B safety injection (SI) lube oil (LO) cooler, in February 27, 2015, to ensure that resolutions addressed causes and extent of conditions commensurate with their safety significance (P.2). (Section 1R12)

Inspection Report# : [2015002](#) (pdf)

Barrier Integrity

Significance:  Sep 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inoperability of Unit 1 Emergency Containment Coolers due to Incorrect Tagout

Green: A self-revealing NCV of TS 5.4.1.a, "Procedures," was identified for the licensee's failure to specify and verify the correct unit designation in clearance and tagout instructions for removing the Unit 2 nuclear service cooling water (NSCW) system "B" train from service, as required by Administrative Procedure NMP-AD-003, "Equipment Clearance and Tagging," Ver. 17.4. As a result, on September 23, 2014, operators isolated the NSCW supply valve to the "B" train containment coolers on the wrong unit (i.e. Unit 1), rendering it inoperable. Following closure of the valve, operators in the Unit 1 control room received containment coolers low flow alarms and took actions to reposition the valve and restored NSCW flow. The licensee entered this issue into their corrective action program as CR 870005.

The performance deficiency was more than minor because it was associated with the SSC and barrier performance attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that the containment barrier to protects the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency affected the availability of the "B" train of the emergency containment coolers which support the capability of the containment barrier to protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. The finding screened as Green because it did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components, and it did not involve a reduction in function of hydrogen igniters in the reactor containment. The inspectors determined the finding had a cross-cutting aspect of "challenge the unknown" in the human performance area because neither of the individuals that reviewed the tagout documentation stopped, after questioning appropriateness of manipulating 1HV-11689, and evaluated the situation before proceeding. [H.11] (Section 1R20)

Inspection Report# : [2014004](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: **W** Dec 31, 2014

Identified By: Self-Revealing

Item Type: VIO Violation

Shipment of a Type B quantity of RAM in a Type A Container

A self-revealing, preliminary White, AV of Technical Specification (TS) 5.4.1., Procedures, occurred on June 24, 2014, when a Type A shipping cask containing Type B radioactive waste (spent resin) was shipped by Southern Nuclear Operating Company (SNC) from the Vogtle Electric Generating Plant (VEGP), Units 1 and 2, to the Energy Solutions radioactive waste

processing facility located in Barnwell, South Carolina. The serial number of the High Integrity Container (HIC) containing the spent resin was not verified when it was removed from its storage process shield and placed in the shipping cask, with the result that a HIC with a Type B quantity of resin was transported in a Type A shipping cask. This error resulted in multiple violations of NRC and Department of Transportation (DOT) regulations, which are included in Enclosure 2. The licensee entered the event in the corrective action program (CAP) as condition report (CR) 831652. Immediate corrective actions included suspension of radioactive waste shipments at Southern Nuclear Operating Company (SNC) facilities, and requalification of plant Vogtle radioactive shippers and oversight personnel.

The licensee's failure to document the location of radioactive waste stored in the process shields, as required by licensee procedure 46111-C, "Storage of Radwaste in Outdoor Process Shields," was a performance deficiency (PD). The PD was more than minor because it was associated with the public radiation safety cornerstone attribute of Program & Process (transportation program), and adversely impacted the cornerstone objective of ensuring adequate protection of public health and safety from exposure to RAM released into the public domain. A Type B quantity of material left the licensee's facility and entered the public domain in an inadequate (Type A) container. The inspectors determined this finding has a cross-cutting aspect of in the Documentation component of the Human Performance area, because the licensee did not create and maintain complete, accurate, and up-to-date documentation used in preparing shipments of radioactive waste.

The NRC performed a supplemental inspection to assess the adequacy of the licensee's evaluation, extent of condition/cause review and associated corrective actions. The inspectors determined that the licensee performed an adequate evaluation of the specific performance issue and that comprehensive corrective actions were completed to address each of the specific causes.

(IR# 05000424, 425/2015009 dated September 15, 2015)

Inspection Report# : [2014009](#) (*pdf*)

Inspection Report# : [2015009](#) (*pdf*)

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 Apr 03, 2015

Identified By: NRC

Item Type: FIN Finding

Biennial PI&R Summary

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few number of deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. Generally, prioritization and evaluation of issues were adequate, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

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. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work and plant operations.

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.

Inspection Report# : [2015008](#) (*pdf*)

Last modified : September 30, 2015