Surry 2
3Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Unit 2 Trip Due to Loose RPS Wire Connection
An NRC-identified, non-cited violation (NCV) of Surry Technical Specification (TS) 6.4, Unit Operating Procedures and Programs, Section A.7 was identified because Surry procedure 0-ECM-1801-01, "Westinghouse Type BF – BFD – or NBFD65NR Relay Replacement" did not include a torque value for the reactor protection system (RPS) relay terminal screws to a field wiring connection. Subsequently, Unit 2 tripped on October 13, 2014, when a field wire connection became loose from the terminal end of a RPS trip relay and caused a reactor trip breaker to open. The issue was documented in Surry's corrective action program (CAP) as condition report (CR) 561820.

The licensee's failure to specify a torque value in procedure 0-ECM-1801-01 was a performance deficiency (PD) that was within the licensee's ability to foresee and correct. Specifically, the licensee removed the correct torque value from the procedure based on a licensee procedure action request (PAR) that was incorrectly implemented. The inspectors determined that the PD was more than minor because it was associated with the procedural quality attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the procedure that controlled the connection of electrical termination to RPS relays did not specify a torque value and therefore, left it up to the technician to determine the "tightness" of the connection. Using Manual Chapter 0609.04, "Initial Characterization of Findings," Table 2, dated June 19, 2012, the finding was determined to affect the Initiating Events Cornerstone. The inspectors screened the finding using Manual Chapter 0609, Appendix A, "Significance Determination Process (SDP) for Findings at-Power" dated June 19, 2012, and determined that it screened as Green because the deficiency did not cause a loss of mitigation equipment relied upon to transition the plant to a stable shutdown condition. This finding has a cross-cutting aspect in the documentation component of the human performance area, H.7, because the organization failed to maintain complete, accurate and up-to-date documentation for the replacement of RPS relays. (Section 4OA3)

Inspection Report# : 2014005 *(pdf)*

Mitigating Systems

Significance: G May 29, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Implement In-service Testing and Inservice Inspections for Charging Cross-tie Components.
The inspectors identified a Green NCV of 10 CFR 50.55(a) for the licensee's failure to implement in-service testing (IST) and in-service inspections (ISI) for charging cross-tie components. The licensee entered this issue into their corrective

action program as CRs 581385 and 581386.

The licensee failed to scope the charging cross-tie manual isolation valves and piping into the ISI and IST programs. This was a performance deficiency that resulted in the subsequent failure to perform ISI and IST activities required by the ASME OM Code-2004 and 10 CFR 50.55a(f) and (g). The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone. Specifically, the site's failure to perform required inspections and testing for charging cross-tie components, since 1989, resulted in a lack of reasonable assurance that the charging cross-tie function could perform its required function. The finding was screened in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and determined to be of low safety significance (Green) because it did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event. No cross cutting aspect was assigned because the performance deficiency did not occur within the last three years. (Section 1R05.05.02)
Inspection Report# : 2015008 *(pdf)*

Significance: G May 29, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Multiple Design Deficiencies in the Fire Protection Program
The inspectors identified a Green NCV of Surry's Operating License, Condition 3.I, Fire Protection, for design control deficiencies in the fire protection program. The licensee entered this issue into their corrective action program as condition report CRs 581390.

The licensee's failure to adequately implement the design control requirements in the fire protection program as required by Topical Report, DOM-QA-1, "Dominion Nuclear Facility Quality Assurance Program Description," Section 3.2, "Design Control Program" was a performance deficiency. The finding was more than minor because it was associated with the design control attribute and affected the Mitigating Systems cornerstone. Specifically, design control deficiencies resulted in a lack of assurance that the design control requirements were being adequately implemented within the fire protection program. The finding was screened in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and determined to be of low safety significance (Green) because it finding did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event. No cross cutting aspect was assigned because the performance deficiency did not occur within the last three years. (Section 1R05.11.02)
Inspection Report# : 2015008 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Charging Service Water Pipe Leak
An NRC-identified, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified because the licensee failed to promptly identify a condition adverse to quality associated with the material

condition of the Unit 2 charging service water (CH/SW) piping. Specifically, the NRC resident inspectors identified a leak in the discharge piping of the Unit 2 “A” CH/SW pump on November 24, 2014. The licensee had previously identified a leak on the Unit 1 “B” CH/SW pump discharge piping on June 16, 2014. The issue was documented in the licensee’s corrective action program (CAP) as condition report (CR) 563166.

The licensee’s failure to identify a condition adverse to quality associated with the material condition of the Unit 2 “A” CH/SW piping was a performance deficiency (PD). The inspectors determined that the 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, not having compensatory actions in place for CH/SW “Green Thread” piping that has been prone to through-wall leaks, left the licensee susceptible to undetected leaks from the CH/SW piping systems. Using Manual Chapter 0609.04, “Initial Characterization of Findings,” Table 2, dated June 19, 2012, the finding was determined to adversely affect the Mitigating Systems Cornerstone. The inspectors screened the finding using Manual Chapter 0609, Appendix A, “Significance Determination Process (SDP) for Findings at-Power,” dated June 19, 2012, and determined that it screened as Green because the PD did not affect the design or qualification of the CH/SW system and the leak rate did not represent an actual loss of system safety function. This finding has a cross-cutting aspect in the evaluation component of the problem identification and resolution, P.2, because the organization did not thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, the license did not institute compensatory actions for a long-term corrective action on CH/SW piping that has had a recent history of developing through-wall leaks. (Section 1R12)

Inspection Report# : 2015001 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to conduct a detailed visual examination of the concrete-liner interface for the Unit 1 containment
An NRC-identified NCV of 10 CFR 50.55a, “Codes and Standards,” was identified for the licensee’s failure to conduct a detailed visual examination of the concrete-liner interface for the Unit 1 containment, per the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC) Section XI, Subsection IWE 1241, Table IWE-2500-1, Category E-C, Item E 4.11. This issue was documented in the licensee’s CAP as CR 578448.

The licensee’s failure to conduct a detailed visual examination of the concrete-liner interface of the Units 1 and 2 containment in accordance with the ASME BPVC Section XI, Subsection IWE 1241, Table IWE-2500-1, Category E-C, Item E 4.11, was a PD that was within the licensee’s ability to foresee and correct. Using Manual Chapter 0612, Appendix B, Issue Screening, dated September 7, 2012, the inspectors determined that the PD was more than minor because, if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, detailed visual inspections of the containment metallic liner provides assurance that the liner remains capable of performing its intended safety function, and in the absence of such inspections, corrosive conditions could progress to challenge that capability. Using Manual Chapter 0609.04, “Initial Characterization of Findings,” dated June 19, 2012, the finding was determined to affect the Barrier Integrity Cornerstone. The inspectors screened the finding using IMC 0609, Appendix A, “Significance Determination Process (SDP) for Findings at-Power,” dated June 19, 2012, and determined that the finding was of very low safety-significance (Green) because the finding did not represent an actual

open pathway in the physical integrity of the reactor containment. The team determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance. (Section 1R08)

Inspection Report# : 2015002 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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 May 29, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Perform Required 50.59 Evaluations and Failure to Update the UFSAR for Plant Changes Associated with RCP Seal Cooling During Fire Events
Green: The inspectors identified a Green NCV of 10 CFR 50.59 and 10 CFR 50.71(e) for the licensee's failure to perform 50.59 evaluations; and failure to update the UFSAR for plant changes associated with reactor coolant pump (RCP) seal cooling during fire events. The licensee entered this issue into their corrective action program as condition report CRs 5813388.

The licensee's revision of fire safe shut down procedures; and the installation of a different reactor coolant pump seal package without completing the required 50.59 evaluations was a performance deficiency. Additionally, the licensee's failure to

update the UFSAR as required by 10 CFR 50.71(e) was a performance deficiency. The UFSAR did not adequately describe the charging cross-tie function; and did not adequately describe the fire protection program's procedural isolation of the RCP seals for the entire duration of an Appendix R event. In accordance with the Reactor Oversight Process, the performance deficiencies were more than minor because they were associated with the design control attribute of the Mitigating Systems Cornerstone. The performance deficiencies were also assessed using traditional enforcement because the NRC's ability to perform its regulatory function such as, license amendment reviews and inspections was affected. The finding was screened in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and determined to be of low safety significance (Green) because it did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event. No cross cutting aspect was assigned because these performance deficiencies did not occur within the last three years. (Section 1R05.11.01)
Inspection Report# : 2015008 *(pdf)*

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