

Brunswick 1 2Q/2016 Plant Inspection Findings

Initiating Events

Significance: TBD May 31, 2016

Identified By: NRC

Item Type: FIN Finding

Inadequate Procedures to Perform Maintenance on the SAT Non-segregated Bus and the 1B RRP VFD Cables

A self-revealing finding with two examples was identified for the licensee's failure to have adequate procedures to perform maintenance on the startup auxiliary transformer (SAT) non-segregated bus duct and the 1B Reactor Recirculation Pump (RRP) variable frequency drive (VFD) cables. The first example, from May 1997 to the present, procedure 0PM-NSB001, Inspection and Cleaning Non-Segregated Buses, did not contain sufficient information to ensure that deficiencies that could lead to water intrusion in the SAT non-segregated bus duct were identified and corrected. The second example, from October 2003 to June 20, 2016, procedure 0SPP-CBL011, Splicing of Wires and Cables Without Tape, failed to specify use of a depth-limiting cutting tool for removing semi-conductor insulation on the 1B RRP VFD cables. The licensee entered this issue into the corrective action program (CAP) as nuclear condition report (NCR) 1998726.

The inspectors determined that the failure of the licensee to have adequate procedures to perform maintenance on the SAT non-segregated bus duct and the 1B RRP VFD cables was a performance deficiency. The finding was more than minor because it was associated with the equipment 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 shutdown as well as power operations. Specifically, the failure to perform adequate maintenance on the SAT non-segregated bus duct and the 1B RRP VFD cables resulted in a SAT differential lockout, a Unit 1 manual reactor SCRAM, and a loss of offsite power (LOOP). Using IMC 0609, Appendix A, issued June 19, 2012, the Significance Determination Process for Findings At-Power, the inspectors determined the finding screened to a more detailed risk evaluation because the finding caused a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The finding could not be screened to Green and is pending an initial significance characterization and is not yet finalized. The finding does not currently present an immediate safety concern because the licensee repaired the A phase fault on the non-segregated bus, resealed the bus duct bank, spliced in new cables to the 1B RRP VFD breaker and replaced the 1B RRP VFD breaker. The finding has a cross-cutting aspect in the area of human performance associated with the avoid complacency attribute because individuals failed to recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes, and individuals failed to implement appropriate error reduction tools. Specifically, the licensee failed to plan for the inherent risk associated with water intrusion into the SAT non-segregated bus duct and failed to implement error reduction tools when inspecting and repairing the duct. Inspection Report# : [2016008](#) (*pdf*)

Mitigating Systems

Barrier Integrity

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

Last modified : August 29, 2016