

Brunswick 2

1Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Remote Shutdown Panel Power Supply Inverter Design Deficiency

Green. A self-revealing finding and non-cited violation of 10CFR50, Appendix B, Criterion III, was identified for inadequate design controls in modification Engineering Service Request (ESR) 96-00700 which replaced obsolete inverters in Unit 1 and 2 analog trip units and the Unit 2 remote shutdown panel. The deficiency associated with this issue is inadequate design control associated with replacement of the Unit 2 remote shutdown panel power (RSDP) instrument power supply inverter which could have led to the loss of RSDP instrumentation and reactor core isolation cooling (RCIC) control under certain potential fire induced ground fault conditions. The finding is more than minor because it affected the protection against external factors (fire) attribute of the Mitigating Systems Cornerstone in that it potentially affected the availability of RCIC from RSDP. No actual severe fires requiring main control room (MCR) evacuation and use of RCIC have occurred. Given that no credible fire scenario was possible, this safe shutdown finding had low degradation since MCR functions would not be completely lost for any scenario which could cause loss of the RSDP functions. Since the safe shutdown finding had low degradation, a Phase 1 Significance Determination Process review screened the finding as very low safety significance.

Inspection Report# : [2005002\(pdf\)](#)

Significance:  Mar 31, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to identify Condition Adverse to Quality on Emergency Bus Relay Covers

Green. A self-revealing finding and non-cited violation of 10CFR50, Appendix B, Criterion XVI, was identified for failure to promptly identify a condition adverse to quality associated with mispositioned relay covers for several General Electric HGA relays on emergency bus E-1. The finding resulted in relay 1-E1-AE7-CL-B, which provides a confirmatory bus strip signal to the emergency diesel generator (EDG) 1 output breaker, being failed in the operated state. This caused emergency diesel generator EDG 1 to be in an inoperable condition from March 29, 2004 until the condition was discovered on August 16, 2004. The finding is greater than minor because it is associated with equipment performance and affected the functional capability of the system to respond to initiating events. The finding was evaluated using NRC Inspection Manual Chapter 0609 Appendix A. A Phase 3 Significance Determination Process analysis determined this finding to be of very low safety significance based on the limited number of hours the EDG load rating would have been exceeded. The finding is related to the cross-cutting area of problem identification and resolution due to the failure to identify a condition adverse to quality.

Inspection Report# : [2005002\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Storage of Standby Liquid Control System Nitrogen Accumulator Repair Kits

Green. A self-revealing finding and non-cited violation of 10CFR50, Appendix B, Criterion XIII, was identified for failure to store Unit 1 standby liquid control system (SLC) nitrogen accumulator repair kits in a condition which did not prevent deterioration. The licensee's material evaluation of the commercially dedicated part did not include special storage requirements and, therefore, the parts were stored, from at least 1999 until March 2004, in a condition which made them susceptible to developing leaks along folds in the nitrogen accumulator bladders. This resulted in accumulator nitrogen leakage into the Unit 1 standby liquid control system and was determined to be the cause of the 1 B standby liquid control pump being discovered in an inoperable condition on July 8, 2004.

This finding is more than minor because it is associated with equipment performance and affected the functional capability of the system to respond to initiating events. This finding was evaluated using MC 0609 Appendix A. A Phase 3 Significance Determination Process analysis determined this finding to be of very low safety significance (Green) because the redundant train of the Unit 1 SLC system remained operable. The licensee's corrective actions included replacing all of the affected nitrogen accumulator bladders.

Inspection Report# : [2004005\(pdf\)](#)

G**Significance:** Nov 19, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Implementation of the Fire Protection Program For ERFBS Fire Barrier Protection of Circuits In Fire Area DG-8

Green. The inspectors identified a non-cited violation of Brunswick Steam Electric Plant Unit 1 Updated Facility Operating License DPR-71, and Unit 2 Updated Facility Operating License DPR-62, Condition 2.B. (6), for the licensee's failure to adequately implement the fire protection program. In 480 volt switchgear room E7 (Fire Area DG-8), Division II (Train B) circuits in two conduits were routed closer than 20 feet from the redundant Division I (Train A) circuits in the designated separation zone without being protected by a one-hour fire rated barrier, as required. A fire in this area could damage the unprotected cables to components required to achieve and maintain safe shutdown. This finding is greater than minor because it affected the Mitigating Systems Cornerstone objective of equipment availability and reliability, in that required fire barriers for equipment and circuits relied upon for safe shutdown following a fire were not in place. This finding is of very low safety significance because of the low likelihood of fire ignition of transient combustible materials in critical locations near the affected circuits and the exposure transit time of lubricating oil in area DG-8 during diesel generator oil changes is extremely low. In addition, other defense-in-depth fire protection elements including transient combustible administrative controls, passive fire barriers, automatic fire detection, manual suppression capability, and safe shutdown capability from the main control room were still available and effective.

Inspection Report# : [2004010\(pdf\)](#)**G****Significance:** Jun 19, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Install Dielectric Insulating Kit Between Service Water Valve and Pipe Flange

Green. The inspectors identified a non-cited violation of 10CFR50, Appendix B, Criterion V, for failure to install dielectric insulators on a service water isolation valve, required by a modification package. This resulted in a galvanic coupling between the carbon steel piping and the stainless steel valve, which could result in corrosion of the pipe flange at the bolt holes, accelerating corrosion of the interior of the pipe in areas where the cement lining had failed. This finding is greater than minor because it affected the equipment performance attribute of the mitigating systems cornerstone objective to ensure reliability of systems required to respond to initiating events. The finding is of very low safety significance because there was no actual loss of function, and a redundant valve was available for the isolation function.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Jun 19, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow EDG Barring Procedure

Green. A self-revealing Green non-cited violation of Technical Specifications (TS) 5.4.1 was identified for failure to implement a maintenance procedure. Maintenance personnel failed to follow the emergency diesel generator (EDG) barring procedure (predictive maintenance which slowly cranks the engine) by not closing the right bank engine cylinder petcocks while performing the evolution on EDG 1 on June 6, 2004. This resulted in the EDG being inoperable until the condition was discovered when the EDG was started later that day. This finding is greater than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to an event. The finding is of very low safety significance because the EDG was restored to an operable status within the TS limiting condition for operation allowed outage time. The finding was related to the cross-cutting area of human performance because the cause was due to maintenance workers failing to properly follow procedural requirements.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Jun 19, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Consider Vortexing in the Calculation for CST Level for Automatic Transfer of the HPCI Pump Suction

Green. The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, for failure of design calculations to adequately address the potential for air entrainment in the high pressure coolant injection (HPCI) process flow due to vortexing. The Technical Specifications allowable value for the condensate storage tank (CST) level - low function, for automatic HPCI pump suction transfer to the suppression pool, was not adequately supported by these design calculations. The finding is greater than minor because it affects the design control attribute of the mitigating systems cornerstone objective. It is of very low safety significance because the finding is a design deficiency that would not result in loss of the HPCI function, and because the likelihood of having a low level in the CST that would challenge the CST level - low automatic HPCI suction transfer function is very low. In addition, alternate core cooling methods would normally be available, including reactor core isolation cooling as well as automatic depressurization system and low pressure coolant injection.

Inspection Report# : [2004003\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 17, 2005