

Brunswick 1 2Q/2005 Plant Inspection Findings

Initiating Events

G**Significance:** Jun 30, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INADEQUATE CONDENSATE SYSTEM OPERATING PROCEDURE

Green. A self-revealing non-cited violation of Technical Specification (TS) 5.4.1.a. Procedures, was identified for failure to provide adequate condensate system procedural guidance to preclude the reactor feed pumps from tripping on low suction pressure during plant operations. The inadequate procedures contributed to a Unit 2 automatic reactor scram on April 9, 2005, due to low reactor vessel level.

The finding is greater than minor because it is associated with the procedure quality attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. This finding is of very low safety significance because, although it contributes to the likelihood of a reactor trip, it does not contribute to the likelihood that mitigation equipment or functions would be unavailable.

Inspection Report# : [2005003\(pdf\)](#)**G****Significance:** Jun 30, 2005

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INAPPROPRIATE USE OF TECHNICAL SPECIFICATION 3.0.5 IN MODE 5 OPERATIONS

Green. A self-revealing non-cited violation of Technical Specification (TS) 3.0.5., which allows some inoperable equipment, declared as such through a TS Action, to be returned to service solely for the purpose of demonstrating operability, was identified for failure to properly utilize this TS when returning a control rod to service following maintenance with Unit 1 in Mode 5 (Refueling). This resulted in the failure to meet the required actions of TS 3.9.2, Refuel Position One-Rod-Out Interlock, and TS 3.9.4, Control Rod Position Indication, with the unit in Mode 5.

The finding is greater than minor because it is associated with the equipment configuration control attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions while shutdown. This finding is of very low safety significance because, using Appendix G of the SDP, it did not constitute a finding that required quantitative assessment. The cause of this finding is a performance aspect of the human performance cross-cutting area, in that the cause was attributed to operator knowledge of the requirements of TS 3.0.5 and communication errors between Maintenance and Operations.

Inspection Report# : [2005003\(pdf\)](#)

Mitigating Systems

G**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\(pdf\)](#)**G****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\(pdf\)](#)

Barrier Integrity

Significance:  Jun 30, 2005

Identified By: Self Disclosing
Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL FOR DIGITAL FEEDWATER CONTROL SYSTEM MODIFICATION

Green. A self-revealing non-cited violation of 10CFR50, Appendix B, Criterion III, Design Control, was identified for failure to assure that Technical Specification (TS) requirements for the feedwater and main turbine high water trip function remained operable with the introduction of a filtered time constant for reactor vessel level. As a result, instrumentation associated with TS 3.3.2.2, Feedwater and Main Turbine High Water Level Trip Instrumentation, were inoperable from April 30, 2004 for Unit 1 and April 30, 2003 for Unit 2 until the time constant filters were removed on April 10, 2005

This finding is greater than minor because it is associated with the design control attribute of the Barrier Integrity Cornerstone and affects the cornerstone objective of providing reasonable assurance that physical design barriers (i.e., fuel cladding) protect the public from radionuclide releases caused by events. This finding is of very low safety significance because it could affect the fuel cladding, but could not effect the integrity of the reactor cooling system. The cause of this finding is identified as a performance aspect of the human performance cross-cutting area, in that the cause was attributed to a lack of sufficient questioning attitude from engineering personnel, related to the impact of a parameter change on all system output responses.
Inspection Report# : [2005003\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Significance: N/A Aug 27, 2004

Identified By: NRC

Item Type: FIN Finding

Results of Brunswick Unit 1 Loss of Offsite Power Special Inspection

A special inspection was conducted following a Brunswick Unit 1 Loss of Offsite power on August 14, 2004. The inspectors determined: (1) The cause of the loss-of-offsite power was the internal failure of a switchyard breaker as it responded to a line fault outside the unit's switchyard: that failure led to loss of power on the 1B bus, which caused, in turn, a loss of power to the unit 1 startup transformer, and the loss of both recirculation pumps. (2) The site switchyard design and configuration complied with General Design Criterion 17. The inspectors noted that changes could be made in the switchyard configuration and some switchyard equipment which could significantly reduce the unit's vulnerability to similar events in the future. The licensee initiated efforts to review and evaluate enhancements. (3) A load-shed permissive HGA relay on emergency bus 1 failed when the relay dust cover prevented the relay armature from actuating. Several loads were not shed from the bus before emergency diesel generator (EDG)-1 picked up the loads on that bus. Upon identifying the relay problem, the licensee corrected the involved relay problem, completed an adequate operability determination of EDG-1 and also performed the Technical Specifications-required common-cause analysis of the other EDGs. (4) To verify that no other important HGA relays had mispositioned dust covers, the licensee examined a larger population of relays in other applications. The initial relay examination identified a number of conditions that needed to be corrected, however, none of those conditions prevented the proper operation of any relay. Because the initial examination had been completed using an informal methodology, the licensee had not developed documentation that was adequate to support an operability determination. Some Operations personnel and management were not aware of how the identified relay conditions had been addressed. The licensee subsequently re-examined the subject relays, using a more formal and approved process. The re-examination was completed and the operability determination was formally documented prior to continuing the unit restart.

Inspection Report# : [2004011\(pdf\)](#)

Last modified : August 24, 2005