

## Brunswick 2

### 4Q/2005 Plant Inspection Findings

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#### Initiating Events

**G****Significance:** Jun 30, 2005

Identified By: Self-Revealing

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\(pdf\)](#)

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#### Mitigating Systems

**G****Significance:** Nov 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate Procedural Controls for RHR System Venting**

Green. A Green NRC identified, non-cited violation (NCV) of Technical Specification (TS) 5.4.1.a was identified for failure to establish written procedures to direct venting of the residual heat removal (RHR) system in response to increasing system pressure. Instead, system venting was directed through informal communications, such as e-mails and telephone calls. The licensee entered the deficiency associated with lack of procedural guidance into their Action Request Program for resolution.

This finding is more than minor because it affected the ability of the licensee to properly control the venting of the RHR system and was associated with the Mitigating Systems Cornerstone and the respective attribute of procedure quality. The finding is of very low safety significance because there was no actual loss of safety function. A contributing cause of the finding is related to the cross-cutting element of problem identification and resolution.

Inspection Report# : [2005007\(pdf\)](#)**G****Significance:** Sep 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

**Failure to Properly Control the EDG Control Switch**

Green. A self-revealing finding was identified for failure to properly control the emergency diesel generator control switch to assure reliability of the offsite power source to the plant's emergency buses. As a result, Brunswick Units 1 and 2 experienced a loss of power to emergency bus E-1 on May 12, 2005 when it's feeder breaker from the offsite power source opened following a voltage transient initiated by a fault on another emergency bus. The licensee entered this issue into the corrective action program.

This finding is greater than minor because it is associated with the operating equipment lineup attribute of the Mitigating Systems Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because it did not represent an actual loss of safety function of a single train for greater than the TS allowed outage time.

Inspection Report# : [2005004\(pdf\)](#)**G****Significance:** Aug 12, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Generate an A/R for Abnormal Conditions Identified in Work Orders**

A non-cited violation (NCV) of 10CFR50, Appendix B, Criterion XVI was identified because the licensee failed to promptly identify a condition adverse to quality in that licensee personnel failed to generate an Action Request (A/R) for abnormal conditions identified in the comment section of work orders associated with OPM-GEN005, "Diesel Generator Electrical Inspections."

This finding is greater than minor because it is associated with the reactor safety Mitigating System Cornerstone and affects the configuration control attribute of the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). A phase one evaluation determined that the performance deficiency was of very low safety significance because the abnormal conditions did not effect the operability of the affected components. This finding also involved the cross-cutting aspects of problem identification and resolution (PI&R) in that the licensee failed to properly identify or address these issues in the corrective action system. [An additional example of this NCV was identified in IR 05000325,324/2005004 with the additional title of Failure to Identify a Vulnerability to Spurious Tripping of EDG during the Start Sequence.]

Inspection Report# : [2005010\(pdf\)](#)

**G**

**Significance:** Mar 31, 2005

Identified By: Self-Revealing

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:** Mar 31, 2005

Identified By: Self-Revealing

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\(pdf\)](#)

**Barrier Integrity****G**

**Significance:** Jun 30, 2005

Identified By: Self-Revealing

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\(pdf\)](#)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

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

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## Miscellaneous

**Significance:** N/A Dec 16, 2005

Identified By: NRC

Item Type: FIN Finding

### **PROBLEM IDENTIFICATION AND RESOLUTION**

The inspectors determined that the licensee was effective in identifying problems and entering them into the Corrective Action Program (CAP). One example was noted where new action requests/nuclear condition reports (ARs/NCRs) were not written for current failures, instead the issue was tracked with an old NCR. Problem evaluation and corrective action implementation were generally effective with deficiencies noted in corrective action timeliness and in the quality and timeliness of investigations. The inspectors noted several examples where significant adverse conditions had recurred, indicating that all root/contributing causes had not been determined or that corrective actions had not provided timely resolution. Significant investigations were ongoing and recent CAP process changes were initiated by management to address these issues. The inspectors did not identify any new CAP problems not already being addressed by the licensee. The inspectors determined that the site staff felt free to raise issues and that management wanted issues placed into the CAP for resolution. Some engineering department staffing and CAP workload distribution concerns were noted in the employee concerns program (ECP). The ECP coordinator and management were already addressing the underlying issues related to these concerns and their potential affect on plant equipment. The inspectors did not identify any reluctance to report safety concerns.

Inspection Report# : [2005011\(pdf\)](#)

Last modified : March 03, 2006