

Brunswick 1

1Q/2006 Plant Inspection Findings

Initiating Events

G**Significance:** Mar 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Procedure Resulting in Condensate System Transient

A self-revealing non-cited violation of Technical Specification 5.4.1, Administrative Controls (Procedures), was identified for failure to properly implement requirements for procedure adherence when rinsing a Unit 1 condensate deep bed demineralizer. Procedure steps for starting a third condensate pump when rinsing a condensate deep bed demineralizer at high power were marked N/A (not applicable) and the procedure was performed prior to obtaining supervisor concurrence. As a result, performance of the rinsing procedure on January 4, 2006, resulted in a reduction in condensate system pressure and a plant transient which challenged control room operators. The licensee entered the issue into the corrective action program for resolution. Operators took immediate actions by entering the appropriate abnormal operating procedure and stabilized the plant. In addition, a root cause investigation was performed and the responsible individuals were coached relative to their performance.

This finding is greater than minor because it is associated with system configuration control and affected the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Although the event contributed to the likelihood of a reactor trip, the finding is of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. The cause of this finding is inadequate use of a condensate system procedure and inadequate adherence to an administrative procedure, and is therefore, identified as a performance aspect of the Human Performance cross-cutting area. (Section 4OA2.2).

Inspection Report# : [2006002\(pdf\)](#)**G****Significance:** Dec 31, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Clearance Order Causes Condensate System Transient

Green. A self-revealing non-cited violation of Technical Specification 5.4.1, Administrative Controls (Procedures), was identified for failure to establish an adequate clearance order procedure in preparation for maintenance activities on the Unit 1 B condensate booster pump minimum flow valve. Implementation of this inadequate clearance order procedure on November 9, 2005 resulted in a reduction in condensate system pressure and a plant transient which challenged control room operators. The licensee entered the issue into the corrective action program for resolution. Immediate actions were the operators entered the appropriate abnormal operating procedure and stabilized the plant. In addition, a root cause investigation was performed and the responsible individuals were coached relative to their performance.

This finding is greater than minor because it is associated with system configuration control and affected the Initiating Events Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Although the event contributed to the likelihood of a reactor trip, the finding is of very low safety significance because it did not contribute to the likelihood that mitigation equipment or functions would be unavailable. The cause of this finding is identified as a performance aspect of the human performance cross-cutting area, in that personnel taking shortcuts to expedite the writing of the clearance order procedure contributed to the transient.

Inspection Report# : [2005005\(pdf\)](#)**G****Significance:** Jun 30, 2005

Identified By: Self-Revealing

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\(pdf\)](#)

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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\(pdf\)](#)

Mitigating Systems

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Significance: Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Appropriately Evaluate Core Spray Header Piping Flaw

An NRC-identified non-cited violation of Technical Specification 3.5.1, Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling System, was identified for failure to appropriately evaluate and take corrective measures for a pre-existing flaw on a Unit 1 core spray loop B pipe weld (in-vessel) in accordance with Boiling Water Reactor Vessel and Internals Project guidelines which was committed to by the licensee. This resulted in the Unit 1 core spray loop B subsystem being inoperable for an indeterminate amount of time. The licensee entered the issue into the corrective action program, reevaluated the flaw and implemented a permanent repair of the pipe weld.

This finding is greater than minor because it is associated with core spray system equipment performance and affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance based on core spray loop B being conservatively assumed to be capable of mitigating all analyzed pipe breaks during the time period assumed, except the large break LOCA core damage sequence (Section 1R22).

Inspection Report# : [2006002\(pdf\)](#)

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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\(pdf\)](#)

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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\(pdf\)](#)

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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\(pdf\)](#)

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\(pdf\)](#)

Emergency Preparedness**Occupational Radiation Safety**

Public Radiation Safety

Physical Protection

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

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 : May 25, 2006