

# Brunswick 1

## 1Q/2009 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Perform a 10 CFR 50.59 Evaluation for a Plant Modification**

The inspectors identified a severity level IV NCV of 10 CFR 50.59, “Changes, Tests, and Experiments” for failing to perform a written safety evaluation prior to implementing a change to the facility as described in the Updated Final Safety Analysis Report (UFSAR), when the Unit 1 and Unit 2 reactor building instrument air standby compressors were permanently abandoned. The licensee entered the issue into their corrective action program and performed a written safety evaluation of the condition.

The inspectors determined that, until identified by NRC inspectors, the licensee had not performed a 10 CFR 50.59 safety evaluation for the abandonment of the instrument air standby compressors, and this is a performance deficiency. Because this is a violation of 10 CFR 50.59, it is considered to be a violation which potentially impedes or impacts the regulatory process. Therefore, such violations are dispositioned using the traditional enforcement process instead of the Significance Determination Process. This finding was determined to be more than minor because there was a reasonable likelihood that the change requiring a 10 CFR 50.59 safety evaluation would require Commission review and approval prior to implementation in accordance with 10 CFR 50.59(c)(2). This likelihood is based on the increased likelihood of loss of reactor building instrument air, reactor scram, and closure of the outboard MSIVs, which is an occurrence of a malfunction of a structure, system, or component (SSC) that is analyzed in the UFSAR. To determine the significance of the violation, the inspectors completed a significance determination review using IMC 0609, Appendix A, Significance Determination of Reactor Inspection Findings for At Power Situations. The finding impacted the initiating events cornerstone. Because the finding does not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, this finding has very low safety significance. The cause of the finding is not related to a cross-cutting aspect because the performance deficiency is not indicative of current licensee performance.

Inspection Report# : [2009002](#) (*pdf*)

**Significance:**  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Correctly Perform Biennial Written Examination for a Licensed Operator**

The inspectors identified a non-cited violation of 10 CFR Part 55.59(a)(2) for failure to correctly evaluate and grade a written examination during the biennial requalification examination for licensed operators. The licensee operations training staff incorrectly allowed two correct answers for a question, where the answers were diametrically opposed (opposite one another) which is prohibited by the examination guideline NUREG-1021.

This finding is more than minor because if left uncorrected, it could become a more significant safety concern in that licensed operators would not be adequately tested to ensure an acceptable knowledge level for performing licensed duties. Using the Licensed Operator Requalification Significance Determination Process, this finding was determined to be of very low safety significance (Green) because the individual that failed was a part of a crew that passed their biennial examinations and no issues resulted during the actual watch standing of this crew. All other operators involved were able to perform assigned licensed duties. The finding was a result of the licensee not in compliance

with the requirements of TAP-403, "Conduct of Examinations," and TAP-411, "Continuing Training Annual/Biennial Exam Development, Administration and Security." The finding was related to the cross-cutting aspect of procedural compliance of the work control component of the cross-cutting area of Human Performance (H.4(b)) because the examination developers did not comply with procedure requirements to ensure examination integrity was maintained. The licensee has initiated a root cause analysis to determine the primary and contributing causes of this event.

Inspection Report# : [2008005](#) (*pdf*)

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Procedure for Performing Maintenance on the Control Room AC Subsystem**

A self-revealing Green non-cited violation of Technical Specification 5.4.1 was identified for an inadequate procedure used to specify configuration controls during a maintenance activity. The configuration management program implementation procedure, ADM-NGGC-0106, was not clear in determining whether additional actions should be taken to ensure Control Room Air Conditioning (AC) operation while preventative maintenance was being performed on the CREV system. The three Control Room AC subsystems tripped inadvertently during the performance of this planned preventive maintenance activity due to the supply fan dampers drifting shut, resulting in Unit 1 and Unit 2 entering LCO 3.0.3. This issue was entered into the licensee's Corrective Action Program (CAP) as AR 281950.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of equipment performance. The finding was determined to be of very low safety significance because it did not represent an actual loss of safety function for greater than the TS allowed outage time. The finding has a cross-cutting aspect in the area of Human Performance of complete documentation because the licensee did not provide an adequate procedure that provided clear guidance in identifying intrusive maintenance on the CREV system such that appropriate actions were taken to ensure proper operation during preventative maintenance. (H.2.(c))

Inspection Report# : [2008003](#) (*pdf*)

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Calibration Procedure for the Conventional Service Water Relays**

A self-revealing Green non-cited violation of Technical Specification 5.4.1 was identified for an inadequate procedure used for the calibration of the conventional service water pump logic relays in September 2007. Specifically, procedure OPM-RLY-001, PM GE HFA Relays, used to calibrate the conventional service water (CSW) pump relays was inadequate because the procedure was determined not to be applicable to the relay type. The incorrectly calibrated conventional service water pump relay resulted in improper operation of the conventional service water pump and could have affected proper emergency diesel generator operation during a Loss of Offsite Power (LOOP) Event. The finding is in the licensee's Corrective Action Program (CAP) as AR 245864.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of equipment performance. The finding was determined to be of very low safety significance because it did not contribute to improper emergency diesel generator operation. The finding has a cross-cutting aspect in the area of Human Performance of complete documentation because the licensee did not provide an adequate procedure to calibrate the CSW pump relays. (H.2.(c))

Inspection Report# : [2008003](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Identify and Correct a Condition Adverse to Quality Affecting the Operability of the Standby Gas Treatment Train B**

The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" which states in part, that for conditions adverse to quality, measures shall assure that the cause of the condition is determined and corrective action taken. Specifically, the licensee failed to correct a condition that allowed leakage through a penetration seal in the Unit 1 reactor building supply air ventilation room floor onto the 1B standby gas treatment (SBGT) train control panel, rendering the 1B SBGT inoperable. The licensee entered the issue into their corrective action program and repaired the degraded penetration.

The deficiency associated with this event is not adequately sealing the floor penetration in the Unit 1 reactor building supply air ventilation room. The finding is more than minor because it was associated with the containment barrier performance attribute of the barrier integrity cornerstone to provide reasonable assurance that physical design barriers provide protection against radionuclide releases caused by accidents or events. In accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the inspectors conducted a Phase I significance determination process (SDP) screening and determined the finding to be of very low safety significance (Green). The finding was of very low safety significance (Green) because the finding only represents a degradation of the radiological barrier function provided for the SBGT system. The cause of the finding is not related to a cross-cutting aspect because the occurrence was greater than three years ago and is not indicative of current licensee performance.

Inspection Report# : [2009002](#) (*pdf*)

**Significance:**  Mar 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Maintenance Procedure for the Control Room Air Conditioning and Emergency Ventilation Instrument Air System**

A self-revealing Green NCV of Technical Specification (TS) 5.4.1, Procedures, was identified for inadequate maintenance procedures for the control room air conditioning and emergency ventilation system instrument air dryer. As a result, on January 21, 2009, the control room air conditioning and emergency ventilation instrument air system lost air pressure, rendering the control room air conditioning (AC) system and the control room emergency ventilation (CREV) system inoperable. The licensee entered the issue into their corrective action program and changed maintenance and operating procedures to prevent recurrence.

The failure to implement adequate maintenance procedures for the control room air conditioning and emergency ventilation instrument air system is a performance deficiency. This performance deficiency is more than minor because it is associated with structure, system, and component (SSC), and barrier performance attribute of the Barrier Integrity Cornerstone. It also adversely affected the cornerstone objective of maintaining a radiological barrier for the control room. The finding was determined to be of very low safety significance because it only affected the radiological barrier function of the control room, and does not represent a degradation of the smoke or toxic atmosphere barrier function of the control room. The finding affects the cross-cutting area of human performance, resources component, complete and accurate documentation aspect because the licensee did not incorporate adequate guidance for maintaining the control room AC and CREV instrument air dryer in their maintenance procedures. (H.2.

(c))

Inspection Report# : [2009002](#) (*pdf*)

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## Emergency Preparedness

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# Occupational Radiation Safety

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## Public Radiation Safety

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: FIN Finding

### **Failure to Conduct Adequate and Timely Evaluations of Onsite Groundwater Monitoring Well Tritium Concentration Trend Data**

The inspectors identified a Green finding (FIN) for failure to properly evaluate the potential causes of increased tritium (H-3) concentrations in groundwater samples collected and reviewed in accordance with Brunswick procedure E&RC-3250, "Environmental and Radiation Control." Specifically, the licensee failed to properly evaluate, and initiate actions to address increasing H-3 concentrations reported from 2003 through 2007 for quarterly samples collected from Environmental Sampling Station (ESS)-2C and ESS-16 monitoring wells. The failure to properly investigate the increasing H-3 concentrations resulted in the licensee continuing to attribute the subject results to a 1994 U2 radioactive liquid effluent waste line break without considering potential leakage of contaminated liquids from U2 storm drain piping.

This issue has been entered in the licensee's CAP as NCR 268357.

The finding is more than minor because it is associated with the Program and Process attribute of the Public Radiation Safety Cornerstone and adversely affects the cornerstone objective because it relates to effluent measurement and abnormal releases. The licensee's failure to recognize the increasing groundwater tritium concentrations delayed actions to address and correct abnormal liquid releases within the switchyard area. Using the Public Radiation Safety Significance Determination Process, this finding was determined to be of very low safety significance (Green) because the performance deficiency did not result in offsite releases and resultant offsite doses to members of the public and was not a failure to implement the effluent program. Furthermore, the finding did not prevent the licensee from initiating appropriate corrective actions to determine extent of the contamination and to mitigate its effect on the surrounding environs. The cause of the finding was related to the cross cutting area of human performance, the component of work practices, and the aspect involving supervisory oversight of work activities, because the licensee failed to properly evaluate monitoring well sample data to determine the possible radiological effects of plant operation on the local groundwater.

Inspection Report# : [2008003](#) (*pdf*)

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## Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

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