

Brunswick 1

4Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

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*)

Significance:  Feb 29, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate and Correct a Condition Adverse to Quality Involving Service Water Fouling of the 1A RHR Heat Exchanger

The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for the inadequate evaluation and corrective actions to address a condition adverse to quality involving degraded performance of the 1A Residual Heat Removal (RHR) Heat Exchanger (HX) due to Service Water (SW) fouling. The licensee documented this issue in their corrective action program as nuclear condition report 268318. The licensee also performed an operability evaluation of the RHR system, and instituted compensatory measures until the condition could be corrected during the Spring 2008 Unit 2 outage.

The finding is more than minor because if left uncorrected, the issue would become a more significant safety concern in that the potential existed for making the 1A RHR HX inoperable due to tube sheet fouling. In addition, the inspectors also determined that this issue was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected 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). The finding was determined to be of very low safety significance because the degraded condition did not actually result in a loss of the RHR system safety system function. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity, in that the licensee did not promptly address an adverse trend in the 1A RHR HX's performance. (P.1.(d))

Inspection Report# : [2008006](#) (*pdf*)

G**Significance:** Feb 29, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct a Condition Adverse to Quality Involving an MSIV Design Deficiency

The inspectors identified a Green non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, for failure to correct a condition adverse to quality (i.e., design deficiency) which led to multiple and repetitive failures of the main steam isolation valves (MSIVs). The March 2007 failure of the 2-B21-F028A outboard MSIV to pressurize during local leak rate testing (LLRT) exhibited similar symptoms to previous MSIV failures which occurred over the period from 2003 to 2006. The inspectors identified a number of missed opportunities by the licensee to properly identify and correct the failure mechanism (i.e., design deficiency) which led to the most recent failures. The licensee has entered this issue into the corrective action program as nuclear condition report 267744, and was evaluating their plans to improve MSIV performance.

This finding is of greater than minor safety significance because it was associated with the Containment Barrier Performance attribute of the Barrier Integrity Cornerstone, and adversely affected the cornerstone objective of containment isolation reliability to protect the public from radiological releases caused by accidents or events. The finding was determined to be of very low safety significance because there was no loss of safety function (i.e., simultaneous failure of both the inboard and outboard MSIVs) that resulted in an actual open pathway in the physical integrity of containment. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity, regarding an adverse trend of continuing MSIV LLRT failures. (P.1.(d))

Inspection Report# : [2008006](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

G**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*)

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.

Miscellaneous

Last modified : April 07, 2009