

Brunswick 2

2Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

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:  Oct 15, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Corrective Action for Fisher Model 9100 Unbonded Butterfly Valve Failures

The inspectors identified an NCV of 10 CFR 50 Appendix B, Criterion XVI, for failure to promptly identify and correct a condition adverse to quality related to foreign material in the service water system (SW) resulting from Fisher butterfly valve rubber lining failures. There had been a number of failures of Fisher butterfly valve rubber linings since 1985 including a Unit 1 failure in 2004 and a Unit 2 failure in 2005. The examples in 2004 and 2005 were examples where valve lining material was missing from Fisher valves and all the material was not accounted for and removed from the SW system. On August 16, 2007, the licensee detected reduced flow from the 1B Residual Heat Removal (RHR) room cooler and on August 18, 2007, identified foreign material in the inlet piping to the cooler. Additional rubber lining material was also found in the 1 A RHR room cooler. An additional example of Fisher valve foreign material in the SW system was noted in 2005 in the Unit 2 2B Turbine Building Component Cooling Water Heat Exchanger. The licensee entered this issue into the corrective action program.

The failure to maintain the SW system free of foreign material was considered a performance deficiency and a finding in the mitigating systems cornerstone. This finding is greater than minor because it affected the availability and reliability of the RHR room coolers which support the emergency core cooling equipment used to mitigate the consequences of an accident. Although related to degradation in the service water system, the finding is of very low safety significance because the licensee detected the change in SW flow and removed the material prior to the flow reduction reaching the minimum required flow for accident mitigation. There was no loss of safety function from

either train of service water. This finding has an appropriate and timely corrective action aspect in the cross-cutting area of problem identification and resolution because the licensee failed to recognize the foreign material as a condition adverse to quality and implement timely corrective action to locate the source of and remove all the material from the SW system

Inspection Report# : [2007011](#) (pdf)

Significance:  Sep 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Diesel Generator Trip Due to Failure to Follow Procedure

A self-revealing Green non-cited violation (NCV) of Technical Specification 5.4.1 was identified for failure to follow the Diesel Generator monthly load test procedure (OPT-12.2D) which resulted in Diesel Generator number 4 tripping on reverse power and locking out. This issue was entered into the corrective action program for resolution.

The finding was more than minor because it was associated with the equipment performance attribute of the mitigating system cornerstone objective of ensuring the availability of systems that respond to initiating events. The finding was assessed using the Significance Determination process and determined to be of very low safety significance (Green) because it did not contribute to a loss of the Diesel Generator safety function for greater than its technical specification allowed time. This finding was related to the human performance and error prevention aspect of the crosscutting area of human performance because the Diesel Generator tripping on reverse power and locking out was the result of a human error due to the failure to properly use self and peer checks (H.4.a). (Section 1R22)

Inspection Report# : [2007004](#) (pdf)

Barrier Integrity

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

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 : August 29, 2008