

Brunswick 2

1Q/2011 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: **G** Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correct a condition adverse to quality involving corrosion-related failures in the emergency diesel generator starting/control air system

The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for failure to promptly correct a condition adverse to quality regarding moisture and corrosion buildup in carbon steel components used in the emergency diesel generator (EDG) starting/control air systems, leading to EDG starting/control air components experiencing ongoing failures due to moisture-related corrosion buildup. The licensee has initiated NCR 424932 and new corrective actions are currently being developed.

The inspectors determined that the licensee's failure to take adequate corrective actions for the corrosion buildup in the carbon steel components used in the EDG starting/control air system was a performance deficiency. The inspectors determined that the finding is more than minor because if left uncorrected, the issue would become a more significant safety concern in that the potential exists for an EDG failure. This issue is associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects 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). Specifically, the corrosion buildup in the carbon steel components used in the EDG starting/control air system due to moisture has adversely affected the reliability of the EDGs. This finding was evaluated using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet for mitigating systems. The finding was determined to be of very low safety significance (Green) because the degraded condition did not actually result in the loss of the EDG system safety function or the loss of function of a single EDG. This finding has a cross-cutting aspect in the Corrective Action Program (CAP) component of the Problem Identification and Resolution area because the licensee did not take appropriate corrective action 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 correct the adverse condition of corrosion products in the EDG starting/control air system. (P.1(d)) (Section 1R12)

Inspection Report# : [2010004](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance: **W** Sep 17, 2010

Identified By: NRC

Item Type: VIO Violation

Failure to timely augment on-shift staffing

An NRC-identified, low to moderate safety significance (White), apparent violation (AV) of 10 CFR 50.54(q) was identified in that the licensee failed to meet the requirements of 10 CFR 50.47(b)(2). The Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF) were not activated until approximately two and one-half hours after the Alert declaration due to delays in the notification and response of the Brunswick emergency response organization (ERO).

10 CFR 50.54(q) requires that the facility shall follow and maintain in effect Emergency Plans which meet the standards in 10 CFR 50.47(b). 10 CFR 50.47(b)(2), states, "On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified." Brunswick Plant Emergency Procedures OPEP-02.6.12, OPEP-02.6.26, and OPEP-02.6.27 require activation of the OSC, TSC and EOF respectively within 60 – 75 minutes following the declaration of an ALERT or higher emergency classification. Contrary to the above, on June 6, 2010, the Brunswick Steam Electric Plant ERO failed to provide initial facility accident response through timely augmentation of on-shift staffing after declaration of an alert at Brunswick. This resulted in the delay of OSC, TSC, and EOF activation by 75 minutes.

The licensee's failure to maintain its emergency plan in effect is a performance deficiency and an apparent violation (AV) of 10 CFR 50.54(q). The cause of this finding was directly related to the cross-cutting aspect of, "The licensee conducts self-assessments at an appropriate frequency; such assessments are of sufficient depth, are comprehensive, are appropriately objective, and are self-critical. The licensee periodically assesses the effectiveness of oversight groups and programs such as CAP, and policies." P.3(a)

Inspection Report# : [2010010](#) (*pdf*)

Inspection Report# : [2010007](#) (*pdf*)

Significance:  Sep 17, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to timely activate ERDS

A self-revealing, very low safety significance (Green), non-cited violation (NCV) of 10 CFR 50.72(a)(4) was identified. The Emergency Response Data System (ERDS) was not activated until 80 minutes after the Alert declaration due to a lack of on-shift staffing experience and inadequate procedural guidance.

10 CFR 50.72(a)(4), states, "The licensee shall activate the Emergency Response Data System (ERDS) as soon as possible but not later than one hour after declaring an Emergency Class of alert, site area emergency, or general emergency. The ERDS may also be activated by the licensee during emergency drills or exercises if the licensee's computer system has the capability to transmit the exercise data." Contrary to the above, on June 6, 2010, the Brunswick ERO failed to activate the Emergency Response Data System within one hour after declaring an alert at the Brunswick Steam Electric Plant.

Inspection Report# : [2010007](#) (*pdf*)

Occupational Radiation Safety

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to follow procedures for analyzing radiological air samples for the presence of alpha emitters

The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 5.4.1, Procedures, for the failure of the licensee to perform initial alpha activity analysis of air samples indicating greater than 0.3 Derived Air Concentration (DAC) beta-gamma activity on an approved alpha counter. Section 9.5.12.h of procedure HPS-NGGC-

0024, Alpha Monitoring Guidelines, Rev. 3, states that if gamma scan results indicate the airborne activity is equal to or greater than the beta-gamma DAC-Fraction Action level of 0.3 DAC; (1) perform an initial alpha count on the air sample using a counter approved for air samples; and (2) assess and document the results per site-specific procedures. Contrary to this requirement, on March 10, 11, and 21, 2011, the licensee did not perform an initial alpha count on air samples using a counter approved for air samples and assess and document the results for gamma scan results that exceeded 0.3 DAC. Specifically, air samples for those selected work activities identified DAC concentrations of 0.6589, 0.3152 and 1.45. Licensee corrective actions included instructions to workers to ensure procedural adherence for sample analysis and changes to the software program to prompt the workers to do the sample analysis when the threshold limits were met or exceeded. The licensee entered the issue into its corrective action program as NCR 455307.

This finding is greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process (Monitoring and Radiation Protection Controls) and adversely affects the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from airborne radioactive material during routine civilian nuclear reactor operation. Failure to identify potentially significant contributors to internal dose could lead to unmonitored occupational exposures. The finding was evaluated using IMC 0609, Appendix C, "Occupational Radiation SDP" and was determined to be of very low safety significance (Green) because it was not related to As Low As Reasonably Achievable (ALARA) Planning and the ability to assess dose was not compromised during these instances. In addition, it did not involve overexposure or substantial potential for overexposure because of the relatively low alpha source term in the areas where the surveys were performed. This conclusion was drawn from the results of beta/gamma and alpha smear surveys performed at those selected work locations. However, if left uncorrected, unmonitored internal exposure could have occurred. The cause of this finding was directly related to the cross-cutting aspect of maintaining effective interfaces between work groups in the Work Control component of the Human Performance area. [H.3(b)]. (Section 2RS1)

Inspection Report# : [2011002](#) (*pdf*)

Public Radiation Safety

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 : June 07, 2011