

Hatch 1

4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to correct a condition adverse to quality with the IRM system results in reactor scram

Green. A self-revealing NCV of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, was identified for the failure to adequately correct a condition adverse to quality affecting the Intermediate Range Monitor (IRM) system. Consequently, a Unit 1 reactor scram occurred from 8% rated thermal power on May 10, 2009 during a reactor startup. The cause of the scram was attributed to IRM signal spikes on the A and H IRM instruments when the reactor mode switch was taken to run. Following the reactor scram, the licensee performed repair activities to correct degraded cables and connections to improve the grounding of the IRM system. Additionally, the licensee installed ferrite beads on each cable entering and exiting the IRM preamplifier on all eight IRM channels. This violation was entered into the licensee's corrective action program as CR 2009104764.

The failure to correct a condition adverse to quality is a performance deficiency. The licensee had several prior opportunities to fully investigate and correct the causes associated with IRM instrumentation spiking. Additionally, RER-2003-216 documents a decision not to make system improvements. This performance deficiency is more than minor because it is associated with the equipment performance attribute of the Initiating Events (IE) Cornerstone and adversely affected the IE cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the electrical noise sensed on the IRM A and H instruments resulted in Unit 1 reactor scram on May 10, 2009. The significance of this finding was screened using the Phase 1 of the SDP in accordance with NRC IMC 0609 Attachment 4, Table 4a. This finding screened as Green, because the finding did not contribute to both the likelihood of a reactor trip and likelihood that mitigation equipment or functions would not be available. The inspectors concluded that the finding had an associated crosscutting aspect in the Human Performance area under the Decision Making component because the licensee did not use conservative assumptions when putting RER-2003-216 on hold based on accepting the risk of not making incremental improvements in the IRM grounding system. (H.1(b))
Inspection Report# : [2010004](#) (*pdf*)

Significance: G Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to follow corrective action program procedure and prevent recurrence of severity level 2 root cause

•Green. A self-revealing NCV of 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures and Drawings, was identified for the licensee's failure to follow their corrective action program procedure, NMP-GM-002, Ver. 4.0, that required severity level 1 and 2 condition reports (CR) to have corrective actions that prevent recurrence. From May 2006 to April 2010 licensee procedure NMP-GM-002, Corrective Action Program, Ver. 4.0, was not followed because corrective actions to prevent recurrence were not implemented prior to failure of Analog Transmitter Trip System (ATTS) card 1B21-N690C. The licensee's immediate corrective actions were to replace the failed card, 1B21-641C, the adjacent card 1B21-N690C and the high drywell pressure trip cards 1E11-N694A and C. The licensee initiated CR 2010105161 to address this issue.

The performance deficiency is more than minor because it is associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the Initiating Events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure of ATTS card 1B21-N641C resulted in a spurious Loss of Coolant Accident (LOCA) signal that started Emergency Core Cooling System (ECCS) equipment and resulted in a power reduction to approximately 85%. Due to this finding affecting the safety of an operating reactor, the significance of this finding was screened

using NRC IMC 0609, Attachment 4, Table 4a. Because the finding contributed to the likelihood of a reactor scram, but did not affect mitigation equipment availability, the finding screened as Green. The inspectors concluded that the performance deficiency does not have an associated cross-cutting aspect because the performance deficiency occurred in 2006 and is not indicative of the licensee's current performance in the area of root cause investigations. (Section 1R12)

Inspection Report# : [2010003](#) (pdf)

Mitigating Systems

Significance:  Sep 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to correct a condition adverse to quality results in 1A emergency diesel generator fuel oil line failure

Green. A self-revealing NCV of 10 CFR 50 Appendix B Criterion XVI, Corrective Action, was identified for the licensee's failure to promptly identify and correct a diesel fuel oil leak on the 1A emergency diesel generator. The fuel oil leak was identified by the licensee on April 1, 2010 and the licensee scheduled the leak to be repaired in May 2011. The fuel oil line failed on June 3, 2010 which rendered the emergency diesel generator unavailable and incapable of performing its required safety functions. The licensee replaced the fuel oil fitting and restored operability of the 1A emergency diesel generator on June 5, 2010 to restore compliance. This violation has been entered into the licensee's corrective action program as CR 2010107248.

Failure to ensure the appropriate quality, level of detail, and documentation of assumptions contained within an operability evaluation is a performance deficiency. This performance deficiency is more than minor because it adversely affected the Mitigating Systems Cornerstone objective, specifically the failure to promptly identify and correct a fuel oil line leak on the 1A emergency diesel generator directly resulted in the failure of the fuel oil line rendering the emergency diesel generator unavailable and incapable of performing its required safety functions. IMC 0609 Attachment 4 was used and per table 4a screened as requiring a Phase 2 analysis due to this finding resulting in the single train of the emergency diesel generator being inoperable greater than its allowed outage time contained within Technical Specifications. The emergency diesel generator was unable to perform its intended safety functions from the last successful surveillance test on May 4 through June 3, 2010 yielding an exposure time of 30 days. The pre-solved Phase 2 table contains the 1A emergency diesel generator, and for an exposure time of 3-30 days results in a preliminary significance of White and requiring a Phase 3 analysis to be performed. The Phase 3 analysis resulted in the risk being reduced to less than 1E-6 and the finding was determined to be Green. The inspectors determined this performance deficiency had a cross-cutting aspect in the area of Human Performance under the Work Control component (H.3(b)) because the licensee did not appropriately coordinate work activities through proper communications and consideration of the actual fuel oil leak rate.

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

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain safety related cables in a non-submerged environment

•Green. The NRC identified a NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the licensee's failure implement measures to assure that safety-related cables remained in an environment for which they were designed. Safety-related cables purchased and installed in underground electrical pull boxes at Hatch Nuclear Plant have been subjected to submergence, a condition for which they are not designed. To address this issue the licensee has performed the immediate corrective action of increasing the frequency of measuring water level and pump down of the pull boxes. The licensee initiated CR 2010104298 to address this issue.

This performance deficiency is more than minor because it is associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, it is reasonable to conclude the

cables may be in a degraded condition where the continued reliability of the cable cannot be ensured because: 1) the licensee does not have a cable testing/monitoring program to detect degradation of inaccessible or underground power cables; 2) the cables have been subject to a submerged physical environment which is outside the cables design parameters; and 3) there have been documented failures of cables throughout the nuclear industry due to degradation caused by submergence in water. Because the finding affects the safety of an operating reactor, the significance of this finding was screened using the Phase 1 of the SDP in accordance with NRC IMC 0609, Attachment 4, Table 4a. The finding screened as Green, because the finding is a design or qualification deficiency confirmed not to result in loss of operability or functionality. This finding has a cross-cutting aspect in the Work Control component of the Human Performance area, because the licensee did not appropriately coordinate activities by incorporating actions where maintenance scheduling is more preventive than reactive. Specifically, the licensee did not schedule performance of procedure 52PM-Y46-001-0, Inground Pull Box and Cable Duct Inspection for Water, at a frequency that prevented safety related cable submersion (H.3(b)). (Section 1R06)

Inspection Report# : [2010003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

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

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