

# Hatch 2

## 1Q/2011 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inaccessbile fire hose station in the cable spreading room**

An NRC-identified NCV of Hatch Unit 1 operating license condition 2.C.(3) and Hatch Unit 2 operating license condition 2.C.(3)(a), Fire Protection, was identified for failure to maintain fire hose station HS-C20 operable while equipment in the area was required to be operable. Hose station HS-C20 was determined to be inaccessible to the fire brigade. Immediate corrective actions taken by the licensee included performing a fire protection alternate compensatory measures evaluation, (as required by Fire Hazards Analysis section 9.2, specification 1.6.1 action a), which resulted in staging an additional 100 feet of hose at hose station, HS-C21, located just outside of the cable spread room. This violation was entered into the licensee's corrective action program as CR 2011100783.

Failure to ensure the accessibility and thus operability of HS-C20 or take required compensatory action in accordance with Fire Hazards Analysis Section 9.2 Appendix B Specification 1.6.1 is a performance deficiency. This performance deficiency is more than minor because it adversely affected the protection against external events (fire) attribute of the Mitigating Systems cornerstone objective to ensure the availability and reliability of systems (safety related cable spreading room cabling) that respond to initiating events to prevent undesirable consequences. This violation was assessed using the Phase 1 screening worksheets of Attachment 4 and Appendix F of IMC 0609. The inspectors performed an initial qualitative screening and determined the inoperability of HS-C20 was a low degradation violation against the fire protection program. The cable spreading room fire area contains full pre-action sprinkler coverage and a manual carbon dioxide flooding system. Additionally, a manual hose station and fire extinguishers are located outside the primary access doors to the cable spreading room. Based on the low degradation of the fire protection program, this violation was screened as Green. The inspectors determined this performance deficiency had a cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program component because the licensee did not appropriately identify the long standing issue of the inaccessibility of HS-C20 during monthly surveillance testing. (P.1(a)) (Section 1R05)

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

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Interaction of non-safety related power system with safety systems during bus transfers**

An NRC indentified NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for the failure to properly analyze electrical bus transfers that could adversely affect redundant safety buses. Specifically, the licensee failed to analyze the effects of severe voltage dips on the 4.160 kV safety buses that could occur if a loss of coolant accident occurred coincident with bus transfers that occur during a unit trip. The licensee entered this issue into their corrective action program as CR 2009105775.

The licensee's failure to properly analyze the effects of severe voltage dips during bus transfers was a performance deficiency. The finding was more than minor because it was associated with the Design Control attribute of the Mitigating System Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee

failed to properly analyze the effects of voltage dips that could occur following the transfer of the non-safety bus to the transformer supplying power to redundant safety-related buses during LOCA block loading. The finding was assessed for significance in accordance with NRC Manual Chapter 0609, a Phase III analysis was required since this finding represented a potential loss of safety system function for multiple trains which was not addressed by the Phase II pre-solved tables/worksheets. The regional SRA performed a Phase III analysis for the deficiency. Because the failure of the onsite power system (such as including the turbine/generator tripping scheme) would have to occur concurrent with the loading of large ECCS motors onto safety-related buses in response to an accident the event, the period of vulnerability for the trip is was assumed to be a few seconds. Therefore the likelihood of the event results in a risk very much below the threshold for a colored finding. Because this finding is not related to current licensee performance, no cross cutting aspect was identified. (Section 4OA5.2)

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

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to follow procedure while in shutdown cooling to record corrected reactor water level**

•Green. The NRC identified a NCV of 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures, and Drawings, for the licensee's failure to prescribe in procedure 34GO-OPS-015-2, Maintaining Cold Shutdown or Refueling Condition, appropriate documented instructions for recording and verifying reactor water level when reactor vessel level is greater than 60 inches and instrument 2B21-R605 is unavailable. To address this issue the licensee performed the immediate corrective action of initiating CR 2010104615 and has generated an action item to upgrade procedure 34GO-OPS-015-2.

This performance deficiency is more than minor because it is associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability of systems

(ability of operators to monitor, trend, and maintain reactor water level) to prevent undesirable consequences. Because this finding is associated with the safety of a reactor while the unit was in cold shutdown and on residual heat removal shutdown cooling, NRC IMC 0609, Attachment 4, directs using IMC 0609, Appendix G, Shutdown Operations Significance Determination Process, to determine the significance of this finding. In Appendix G, Attachment 1, Checklist 6 was used because during the time period of this finding the unit was in cold shutdown, with a time to boil < 2 hours, and reactor coolant system level < 23 feet above the top of the reactor vessel flange. Each item in Appendix G, Attachment 1, Checklist 6 was determined to have been met, therefore per Figure 1 of Appendix G this finding screened as GREEN significance because a Qualitative Assessment was not required by Checklist 6. This finding has a cross-cutting aspect in the Work Control component of the Human Performance area, because the licensee did not plan and coordinate work activities consistent with nuclear safety including planned contingencies, compensatory actions, or abort criteria. Specifically, the licensee did not plan and coordinate the activity of transitioning the reference leg for reactor water level instrument 2B21-R605 with contingencies, compensatory actions, or abort criteria addressed to ensure measurable reactor water level was available to control room operators (H.3(a)). (Section 1R20)

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

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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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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