

## Hatch 2

### 3Q/2013 Plant Inspection Findings

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#### Initiating Events

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#### Mitigating Systems

**Significance:**  Sep 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to take required actions for inoperable equipment in accordance with Hatch's fire hazards analysis, Appendix B**

The NRC identified a non-cited violation of Unit 1 License Condition 2.C.(3), "Fire Protection," and Unit 2 License Condition 2.C.(3)(a), "Fire Protection," which occurred on September 3, 2013, when the licensee failed to establish fire watches and compensatory measures required by Hatch's Fire Hazards Analysis, Appendix B, after a fire header pipe rupture rendered sprinklers and hose stations inoperable. The licensee returned the fire header to operable status September 4, 2013, to restore compliance. This violation was entered into the licensee's corrective action program as condition report (CR) 700402.

Failure to establish fire watches and compensatory actions as required by Hatch's Fire Hazards Analysis, Appendix B, when sprinkler systems and hose stations became inoperable on September 3, 2013, was a performance deficiency. This performance deficiency was more-than-minor because the performance deficiency is associated with the mitigating systems cornerstone protection against external factors (fire) attribute and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to establish fire watches and alternate compensatory measures resulted in the loss of fixed fire suppression capabilities within each fire area on the plant site for up to 6 hours. The inspectors screened this finding using IMC 0609, Appendix F, Attachment 1, dated February 28, 2005. Using Part 1, "Fire Protection SDP Phase 1 Worksheet," this finding screened as requiring a Phase 2 analysis, because the duration factor was determined to be 0.01 (< 3 Days), the summation of estimated fire frequency for the fire areas was calculated to be 3.78E-01, and the delta core damage frequency (CDF) calculation of 3.78E-03 was greater than a high degradation value of 1E-6 in Table A1.1. The inspectors submitted this finding to the Region II senior reactor analyst for further processing. A detailed SDP risk evaluation was performed by a regional senior reactor analyst. A bounding SDP risk evaluation was completed using a hand calculation and guidance from NRC IMC 0609 Appendix F. The significant analysis assumptions included a five hour exposure time, plant wide ignition frequency of approximately 3E-1/year, severity factor of 1E-1 (only large fires likely to require use of fixed suppression), probability of non-suppression (PNS) of 5E-1 (10 minute fire growth scenario for base case and PNS of 1.0 no suppression due to the PD for the non-conforming case), and a conditional core damage probability of 1E-1 (assumed that large unsuppressed fire would lead to alternate shutdown scenario). The low exposure period mitigated the risk of the performance deficiency. The result of the bounding SDP evaluation was a core damage frequency increase (?CDF) of < 1E-6/year, a GREEN finding of very low safety significance. The inspectors determined this performance deficiency had a cross-cutting aspect in the human performance area decision-making attribute because the licensee did not use conservative assumptions in decision making when applying actions for inoperable fire hose stations, yard fire hydrants, and sprinklers. [H.1(b)] (Section 4OA3.1)

Inspection Report# : [2013004](#) (pdf)

**Significance:** G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

**Failure to perform appropriate post maintenance test on “2A” EDG**

Green. A self-revealing Green NCV of Hatch Unit 2 Technical Specification 5.4. “Procedures,” was identified on March 9, 2013, when the licensee failed to perform post maintenance activities appropriate to the circumstances to verify “2A” emergency diesel generator (EDG) lube oil heat exchanger integrity at normal plant service water operating pressure prior to declaring the “2A” EDG operable. This violation has been entered into the licensee’s corrective action program as condition report (CR) 603356. The licensee replaced the gasket on the lube oil heat exchanger waterbox flange and on March 10, 2013, “2A” EDG was returned to operable status.

Failure to perform post maintenance activities appropriate to the circumstances to verify “2A” EDG lube oil heat exchanger integrity at normal service water operating pressure prior to declaring the “2A” EDG operable was a performance deficiency. This performance deficiency was more-than-minor because it adversely affected the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the “2A” EDG was rendered unavailable after leakage developed at plant service water pressure. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, “Initial Characterization of Findings”, June 19, 2012, using Table 2, “Cornerstones Affected by Degradation Condition or Programmatic Weakness.” The finding affected the mitigating systems cornerstone and required further evaluation using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” June 19, 2012. Based on Exhibit 2, “Mitigating Systems Screening Questions,” Section A, “Mitigating SSCs and Functionality”, all four questions were answered ‘no’ and thus this finding screened as Green. The inspectors determined this finding had a cross cutting aspect in the human performance area associated with resources - training and sufficiently qualified personnel because senior reactor operators did not ensure that the post maintenance test conditions were at maximum system operating pressure as required by procedure. [H.2(b)]

Inspection Report# : [2013002](#) (pdf)

**Significance:** G Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

**Low voltage safety-related cables subjected to water submersion**

The NRC identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” on October 16, 2012, when the licensee failed to maintain safety-related cables in an environment for which they were designed. Specifically, safety-related cables are not designed for continuous submersion in water. The inspectors determined that a diesel fuel oil storage tank level transmitter cable and the emergency diesel generator 2A fuel oil pump 2A2 power cable were exposed to continuous submersion in water. The licensee removed the accumulated water from the pull box and initiated condition report (CR) 534897 to enter this condition into the corrective action program for resolution.

Failure to maintain safety-related cables in an environment for which they were designed does not meet the 10 CFR Part 50, Appendix B, Criterion III, “Design Control” requirement. The licensee should have identified this violation when addressing Generic Letter 2007-01 and therefore, this failure is a performance deficiency. The finding was more than minor in accordance with IMC 0612, Appendix B, “Issue Screening,” dated September 7, 2012, because it is associated with the Equipment Performance attribute and adversely affected the Mitigating Systems Cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, subjecting a diesel fuel oil storage tank level transmitter cable and the 2A emergency diesel generator

fuel oil transfer pump cable to continuous submersion could degrade the cable and result in failure. In accordance with IMC 0609, Attachment 4, Exhibit 2, "Mitigating Systems Screening Questions", dated June 19, 2012, the finding was determined to be of very low safety significance (Green) because questions 1 through 4 of Section A, "Mitigating SSCs and Functionality," were answered "no." The inspectors determined that the finding does not have a cross-cutting aspect because the cause of the finding was directly related to the licensee's Generic Letter 2007-01 review. This review occurred more than 3 years ago; therefore, the performance deficiency is not indicative of present licensee performance. (Section 1R06)

Inspection Report# : [2012005](#) (*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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## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

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