

## McGuire 2

### 3Q/2015 Plant Inspection Findings

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## Initiating Events

**Significance:** G Sep 30, 2015

Identified By: Self-Revealing

Item Type: FIN Finding

### **Failure to Adequately Implement a Temporary Modification for a Leak Enclosure**

•Green: A self-revealing Green finding (FIN) was identified for failure to adequately implement the modification procedural requirements of engineering directives manual (EDM)-601, "Engineering Change Manual," for a temporary modification that installed a valve leak seal enclosure on main steam drain valve 2SM-27. Specifically, EDM-601 required the weight and vibration response of the enclosure to be evaluated as part of the installation. The failure to consider this resulted in vibration induced piping failure upstream of the valve and an unexpected rapid plant down power.

The failure to adequately implement a temporary modification in accordance with EDM-601 was a performance deficiency (PD). The PD was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. Specifically, the performance deficiency resulted in a rapid down power to approximately 20 percent and subsequent actions to take the Unit 2 turbine generator offline to repair the leak. Using NRC IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the it did not contribute to both the cause of a reactor trip and affect mitigation equipment. The finding had a cross cutting aspect of consistent process, as described in the human performance cross-cutting area because the licensee failed to use a consistent, systematic approach to make decisions during implementation of a temporary modification [H.13]. (Section 40A2)

Inspection Report# : [2015003](#) (*pdf*)

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## Mitigating Systems

**Significance:** G Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Establish Compensatory Actions for Obstructed Fire Sprinkler Spray Nozzle**

Green: An NRC-identified Green NCV of Technical Specification (TS) 5.4.1.d, "Procedures," was identified for failure to evaluate and establish adequate compensatory measures for an impaired fire protection automatic water sprinkler system. Specifically, a solid deck scaffold platform was erected below a sprinkler system spray nozzle that would have obstructed the nozzle spray pattern protecting safe shutdown equipment involving the 2B2 component cooling water pump/motor. The licensee entered the issue into the corrective action program (CAP) as nuclear condition report (NCR) 01931412 and implemented immediate corrective actions to remove the scaffolding obstructing the sprinkler nozzle.

The failure to evaluate scaffolding obstruction of a sprinkler system spray nozzle and implement required fire protection compensatory actions was a performance deficiency (PD). The PD was more than minor because it was associated with the mitigating systems cornerstone attribute of protection against external factors (fire) and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to provide adequate compensatory actions for an obstructed sprinkler nozzle would have reduced the licensee's ability to quickly extinguish fires in the area. The finding was screened in accordance with NRC IMC 0609, "Significance Determination Process," Attachment 4, "Initial Characterization of Findings." Using the guidance in IMC 0609, Appendix F, Attachment 1, "Fire Protection SDP Phase 1 Worksheet, the finding was assigned a category of fixed fire protection systems. The inspectors determined the finding to be of very low safety significance (Green), because it was assigned a "low degradation" rating that was based upon meeting the criteria described in IMC 0609, Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements." Specifically, less than ten percent of the sprinkler nozzles were nonfunctional, there were functional nozzles within five feet of the combustibles of concern, and the system was nominally code compliant. The finding had a cross-cutting aspect of procedure adherence in the human performance area, because the licensee failed to follow scaffolding erection procedures which explicitly required not erecting scaffolding that could obstruct sprinkler nozzles unless approved by a fire protection engineer and necessary compensatory actions were implemented (H.8).

Inspection Report# : [2015002](#) (pdf)

**Significance:**  Jun 05, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **Failure to Verify Protection System DC Molded Case Circuit Breaker Ratings**

•Green: The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," consisting of two examples. In one example, the licensee failed to verify the adequacy of GE model TED molded case circuit breaker (MCCB) design. In the second example, the licensee failed to verify the adequacy of Eaton model HFB MCCB design. The licensee initiated Action Request (AR) 01929605 and AR 193674, which determined the systems were operable because upstream protective devices provided protection from a failed HFB and/or TED MCCBs, and that the HFB and TED MCCBs would be replaced with MCCBs that have adequate ratings.

The licensee's failure to design the Class 1E electric system MCCBs in accordance with IEEE 308-1971 Sections 4.1 and 5.3.5 was a performance deficiency. The team determined that the performance deficiency was more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) because the deficiency affected the design or qualification of a mitigating structure, system, or component (SSC), but the SSC maintained its operability or functionality. No cross-cutting aspect was applicable because the finding was not indicative of current licensee performance.

Inspection Report# : [2015007](#) (pdf)

**Significance:**  Jun 05, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **Failure to Perform Adequate Periodic Testing of Molded Case Circuit Breakers**

•Green: The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," consisting of two examples. In one example, the licensee failed to scope some Class 1E molded case circuit breakers (MCCBs) into the Class 1E MCCB testing program. In the second example, the licensee's test procedure pre-

conditioned the Class 1E MCCBs before testing their safety function. The licensee initiated Action Request (AR) 1936760 and AR 01934403, which determined the systems were operable because an engineering review of previous TED breaker testing and PM's has not shown a trend of degradation of the breakers ability to perform its function. In addition, the licensee planned develop a more extensive and adequate testing program.

The licensee's failure to perform adequate MCCB testing in accordance with IEEE 308-1971, Section 6.3, "Periodic Equipment Tests," was a performance deficiency. The team determined that the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) because the deficiency affected the design or qualification of a mitigating structure, system, or component (SSC), but the SSC maintained its operability or functionality. No cross-cutting aspect was applicable because the finding was not indicative of current licensee performance.

Inspection Report# : [2015007](#) (pdf)

**Significance:**  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Adequately Control Transient Combustible Materials and Ignition Sources in Accordance with the Fire Protection Program**

•Green: An NRC-identified Green NCV of the McGuire Unit 1 and Unit 2 Renewed Facility Operating License Condition 2.C.4, "Fire Protection Program (FPP)," was identified for the licensee's failure to adequately control fire ignition sources in the Unit 1 and Unit 2 exterior doghouses in accordance with the FPP requirements of Nuclear System Directive (NSD)-313, "Control of Transient Fire Loads." Specifically, temporary electric portable heaters were energized for several days without implementing required hourly fire watches, locating the energized heaters greater than prescribed separation distances from safety-related equipment, and preventing other transient combustible materials from being located near the heaters. The licensee placed this issue into their corrective action program (CAP) and took corrective actions to de-energize the heaters, distance the heaters away from safety-related feedwater isolation valve electrical cables, and remove unnecessary transient combustibles from the area.

The failure to control fire ignition sources in accordance with NSD-313 was a performance deficiency (PD) . The PD was more than minor because it was associated with the mitigating systems cornerstone attribute of protection against external factors (fire) and adversely affected the cornerstone objective in that, a fire could have affected nearby safety-related feedwater isolation valve electrical cables which provide a shutdown mitigation function. The finding was determined to be of very low safety significance (Green) because it did not affect the ability of the reactor to reach and maintain cold shutdown condition. This finding had a cross cutting aspect of teamwork in the human performance area because individuals failed to effectively communicate and coordinate their activities to ensure that the temporary heaters were energized following prescribed fire protection control measures and written instructions (H.4). (Section 1R05)

Inspection Report# : [2014005](#) (pdf)

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## **Barrier Integrity**

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## **Emergency Preparedness**

## 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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