

McGuire 2

1Q/2016 Plant Inspection Findings

Initiating Events

Significance:  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*)

Mitigating Systems

Significance:  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

“Failure to Maintain Fire Extinguishers in Contaminated Radiation Control Zones in Accordance with the Fire Protection Program.”

Green. An NRC-identified Green non-cited violation (NCV) of the McGuire Nuclear Station Unit 1 and Unit 2 Renewed Facility Operating License Condition 2.C.4, “Fire Protection Program (FPP),” was identified for failure to perform annual maintenance on fire extinguishers located in contaminated radiation control zones (RCZs). The licensee took immediate corrective action to replace the past due fire extinguishers and entered the issue into their corrective action program as action request (AR) 02009794.

The performance deficiency (PD) was more than minor because if left uncorrected the PD could have the potential to

lead to a more significant safety concern, in that, fire extinguishers located in any contaminated RCZs may not be functional for firefighting purposes due to lack of maintenance. Every fire extinguisher, five total, located in a contaminated RCZ, did not have its annual maintenance up-to-date. The longest duration without annual maintenance was six years for two of the five extinguishers. The finding was determined to be of very low safety significance (Green) within the mitigating system cornerstone because it would not affect the ability to reach and maintain a safe shutdown condition, in that, for each of the fire areas where the out-of-date extinguishers were present, there were also properly maintained fire extinguishers and hose stations outside of the RCZ. The out-of-date extinguishers were weighed and it was determined that they would have performed their function, if needed. The cause of the PD was directly related to the cross-cutting aspect of field presence in the cross-cutting area of human performance because the licensee failed to correct deviations from the FPP and ensure proper oversight of the vendor contracted to perform fire extinguisher maintenance. [H.2] (Section 1R05)

Inspection Report# : [2016001](#) (*pdf*)

Significance:  Dec 11, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Completely and Accurately Translate the Safe Shutdown Analysis to Procedures

Green. The NRC identified a Green non-cited violation (NCV) of McGuire Technical Specification 5.4.1.a, for Unit 1, for having an inadequate procedure to support safe shutdown for a fire in fire area (FA) 15/17. Specifically, the licensee's deterministic safe shutdown analysis identified the need for a procedural action to de-energize PORV 1NC-34A at power supply 1EVDA, breaker 8. This action was not translated to Enclosure 15 of McGuire fire safe shutdown procedure AP-45. This item was entered into the corrective action program (CAP) as action requests (ARs) 1979875 and 1983360, and the licensee initiated a procedure change to incorporate the missing action.

The performance deficiency (PD) was more than minor because it was associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e. fire), and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the guidance of IMC 0609, App. F, the finding was screened as Green because the finding did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event (Task 1.4.5-B). No cross cutting aspect was assigned because the finding did not represent current licensee performance.

Inspection Report# : [2015008](#) (*pdf*)

Significance:  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 preconditioned 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*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Significance: N/A Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Report Unit 2 Unplanned Valid Auxiliary Feedwater Actuation in Mode 4.

SL IV: An NRC identified Severity Level (SL) IV non-cited violation (NCV) of 10 CFR 50.72(b)(3)(iv)(A) was

identified for the licensee's failure to make a required NRC event notification within eight hours for an unplanned valid actuation of the auxiliary feedwater (CA) system. The unplanned valid actuation occurred during main turbine and main feedwater pump safety injection (SI) train trip function testing with Unit 2 in Mode 4 on October 7, 2015. The licensee entered this issue into their corrective action program and subsequently reported this CA actuation to the NRC on October 15, 2015.

The failure to submit an event notification to the NRC within eight hours of occurrence of an unplanned valid CA system actuation in accordance with 10 CFR 50.72(b)(3)(iv)(A) was a performance deficiency (PD). Since the failure to submit an event report within the time requirements may impact the ability of the NRC to perform its regulatory oversight function, this PD was dispositioned under the traditional enforcement process and was determined to be a SL IV violation. Because this SL IV violation was not repetitive or willful, and did not have an underlying technical violation that would be considered more-than-minor, a cross-cutting aspect was not assigned to this violation. (Section 40A3.1)

Inspection Report# : [2015004](#) (*pdf*)

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