

McGuire 2

4Q/2012 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain complete and accurate pre-fire plans

An NRC-identified Green non-cited violation (NCV) of the Unit 2 Facility Operating License, Condition 2.C.4, Fire Protection Program, was identified for failure to maintain pre-fire plans in areas that contain safety-related equipment. The inspectors identified that all copies of fire strategy plan view for the Unit 2 lower annulus and containment were missing from their pre-fire plans and unavailable to the Fire Brigade Leader and Operations personnel in the event of a fire in the Unit 2 reactor building. Corrective actions included replacement of the missing fire strategy plan views and additional review of the fire strategy books located in the Fire Brigade Leader's Kit, Control Room, and Emergency Preparedness office. This violation was entered into the licensee's corrective action program (CAP) as Problem Investigation Program (PIP) M 12-08270.

The performance deficiency (PD) was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Protection Against External Events (Fire) and adversely affected the cornerstone objective, in that, it degraded the manual fire suppression capability. The finding was determined to be of very low safety significance (Green) because the fire brigade consisted of plant personnel familiar with the plant layout and associated fire hazards and appropriate fire-fighting equipment was available. The cause of the PD was directly related to the aspect of complete, accurate, and up-to-date procedures of the Resources Component in the cross-cutting area of Human Performance because the Fire Brigade Program Administrator failed to include all approved plan view updates into the fire brigade response strategies. [H.2(c)]

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

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to correctly implement technical specifications adversely affects requalification operating test quality

An NRC-identified finding was identified associated with the quality of the simulator scenarios developed by the licensee for the licensed operator requalification annual operating test. The licensee failed to follow the Technical Specification (TS) rules of usage for concurrent inoperability as shown in TS Example 1.3-3. The licensee entered this issue into their corrective action program (CAP) as PIP M-12-4157.

The performance deficiency (PD) was determined to be more than minor because it was associated with the Human Performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective in that it impacted the licensee's ability to evaluate and ensure operator performance. The significance determination was performed in accordance with Manual Chapter 0609, Appendix I, and determined to be of very low safety significance (Green). The cause of the finding was directly related to the cross-cutting aspect of personnel training and qualifications in the Resources component of the cross-cutting area of Human Performance, in that the licensee failed to ensure the quality of the operating tests used to evaluate the knowledge, skills, abilities, and training provided to operators to assure nuclear safety. [H.2(b)]

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Aug 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform required extent of condition assessments for quick cause evaluations in accordance with McGuire's quality assurance program

•Green. A finding of very low safety significance and associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified by inspectors for the licensee's failure to perform required extent of condition assessments for Quick Cause Evaluations (QCE) in accordance with McGuire's Quality Assurance Program. Specifically, Nuclear System Directive (NSD) 212, "Cause Analysis," requires in part that an Extent of Condition review shall be conducted as soon as possible when a QCE is performed. One example included the licensee's failure to perform an extent of condition assessment for a QCE of the safety-related NSW system. To address this issue, the license entered PIP M-12-6309 into their CAP.

The failure to perform the required extent of condition assessments for QCE in accordance with NSD 212 was considered a performance deficiency. The finding was determined to be more than minor because it adversely affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to evaluate events for extent of condition applicability for the Nuclear Service Water issue (PIP M-12-0106) was not only a failure to follow a procedure requirement, but allowed the station to be susceptible to the existence of similar discrepancies in other systems, units, organizations, programs, processes, components, or trains. The finding was determined to be of very low safety significance (Green) because the finding did not result in a loss of system safety function or a loss of safety function of a single train for greater than allowed technical specification allowed outage time. The team identified a cross-cutting aspect in the work practices component of the Human Performance area, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel did not follow procedures [H.4(b)]. (Section 40A2.a(3))

Inspection Report# : [2012008](#) (pdf)**Significance:**  Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement planned compensatory measures for impaired auxiliary building fire hose stations

An NRC-identified non-cited violation (NCV) of Technical Specification (TS) 5.4.1.d was identified for failure to implement adequate compensatory measures for multiple impaired manual fire hose stations (FHSs) in accordance with the approved fire protection program. Gated wye valves were not installed as required during a periodic flush of multiple auxiliary building (AB) FHSs rendering them inoperable. The licensee took actions to install the gated wye valves in the affected FHSs to restore them to operable. This violation was entered into the licensee's corrective action program (CAP) as Problem Investigation Program (PIP) M-12-2816.

The performance deficiency (PD) was more than minor because it was associated with the protection against external events attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective in that manual fire suppression capability was impaired. The finding was determined to be of very low safety significance because it represented a low degradation of the manual fire suppression function. The cause of this finding was directly related to the cross-cutting aspect of planning and coordination of work activities in the Work Control component of the Human Performance area, in that the licensee did not plan and coordinate work activities to ensure that adequate compensatory measures were established for impaired fire hose stations. [H.3(a)] (Section 1R05)

Inspection Report# : [2012003](#) (pdf)**Significance:**  Jun 18, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Potential Blocking of TDCA Pump Lube Oil Cooler During Certain Fire Events

The NRC identified a NCV of License Condition 2.C.4 for failure to evaluate potential blockage of the Turbine Driven Auxiliary Feedwater (TDCA) pump lube oil cooler when pump suction is aligned to the circulating water (RC) system. Specifically, during certain fire events causing loss of plant control, the NRC identified that if the RC system piping was aligned to the suction of the TDCA pump as in accordance with the licensing basis, it could result in blockage of cooling water flow for the TDCA pump lube oil cooler. Immediate actions included performing a functional assessment and evaluating potential long term corrective actions. The licensee entered this issue in their corrective action program as PIP M-12-2174.

The performance deficiency was determined to be more than minor because it was similar to IMC 0612 Appendix E question 3j in that, there was reasonable doubt as to the operability of the auxiliary feedwater system when suction was supplied from RC system. In addition, the finding was associated with the design control attribute of the Mitigating Systems Cornerstone and 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 evaluated using IMC 0609, Attachment 4, Phase 1, and IMC 0609 Appendix F, Fire Protection Significance Determination Process, Attachment 1, Phase 1 and determined to be of low safety significance because it only affected the ability to reach and maintain cold shutdown. The NRC determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance.

Inspection Report# : [2012007](#) (pdf)

Significance: G Jun 18, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Tornado Missile Protection for EDG Exhaust Ventilation System

The NRC identified a NCV of 10CFR50, Appendix B, Criterion III, "Design Control," for the failure to ensure adequate tornado missile protection for the emergency diesel generator (EDG) exhaust relief and backdraft dampers as required. Specifically, 12 inches of the upper portion of the EDG Building ventilation system exhaust dampers were exposed and not protected from a tornado-generated missile. The licensee initiated compensatory measures in the form of concrete jersey barriers in front of each exhaust damper opening to provide additional shielding for the unprotected opening. The licensee entered this issue in their corrective action program as PIP M-12-2158.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, there was reasonable doubt the EDG ventilation exhaust would remain functional to support EDG operation in the event tornado-induced missiles damaged the exhaust backdraft relief dampers. The NRC performed a Phase 1 evaluation per IMC 0609, Attachment 4 and determined that the finding was potentially risk significant due to a seismic, flooding, or severe weather initiating events (e.g., tornadoes). Consequently, a Phase 3 analysis was performed by a senior reactor analyst, who determined that the risk significance of the issue was very low (i.e., $\Delta\text{LERF} < 1.0\text{E-}7$). The NRC determined there was a cross cutting aspect in the area of Problem Identification and Resolution, in that the licensee did not thoroughly evaluate problems with adequate tornado missile protection such that the resolutions address causes and extent of conditions, as necessary. [P.1(c)]

Inspection Report# : [2012007](#) (pdf)

Significance: G Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Operable Fire Assembly in Unit 2 Auxiliary Feedwater Pump Room

An NRC-identified Green non-cited violation (NCV) of Technical Specification (TS) 5.4.1.d was identified for failure to maintain an operable fire assembly resulting in an unsealed pipe penetration through a 3-hour rated fire barrier wall separating the Unit 2 Train A/B motor driven auxiliary feedwater pump room from the Unit 2 mechanical penetration equipment room. The licensee reinstalled pipe caps on each end of the unsealed pipe.

The performance deficiency (PD) was more than minor because it was associated with the

protection against external events attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective in that the unsealed opening adversely impacted the ability of the fire barrier to perform its intended safety function. The finding was of very low safety significance because the fire barrier deficiency represented a low fire degradation rating. The finding was directly related to the cross-cutting area of Human Performance under the Procedural Compliance aspect of the Work Practices component because station personnel failed to follow fire protection impairment procedures for breaching a fire assembly. [H.4(b)]
Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Enter Condition Adverse to Quality into the CAP

A NRC-identified Green finding was identified for the failure to follow the site's corrective action program (CAP) procedure which required the initiation of a PIP for a degraded 2B emergency diesel generator (EDG) Bellofram seal. The degraded Bellofram seal contributed to the improper setup of the 2B EDG governor actuator which resulted in the 2B EDG not achieving the required 105 percent full power output.

The performance deficiency was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective in that the capability of the EDG to provide continuous and adequate load margin was affected. The finding was of very low safety significance because it did not represent an actual loss of safety function of the system or train. The finding was directly related to the cross-cutting aspect of implements the CAP with a low threshold in the Corrective Action Program component in the area of the Problem Identification and Resolution because the licensee did not enter the condition into the CAP. [P.1(a)]
Inspection Report# : [2012002](#) (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 Aug 31, 2012

Identified By: NRC

Item Type: FIN Finding

PI&R Summary

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution. Generally, prioritization and evaluation of issues, formal root cause evaluations for significant problems, and corrective actions specified for problems were consistent with licensee CAP procedures. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

The inspectors determined that audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, plant operations, and cause evaluations.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

Inspection Report# : [2012008](#) (*pdf*)

Last modified : February 28, 2013