

Farley 1

4Q/2016 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Follow Procedure Resulted in Automatic Reactor Trip and Safety Injection

Green: A self-revealing NCV of Technical Specification 5.4, "Procedures" was identified on October 1, 2016 when the Unit 1 operations shift crew failed to comply with annunciator response procedure FNP-1-ARP-1.9, Ver. 50 for the "JC4" annunciator. Conditions were met to trip the reactor, but the operations shift crew failed to do so. As a result, approximately 35 minutes later, MSIV 3369A closed which resulted in an automatic reactor trip and safety injection actuation. The failure of the operations shift crew to follow procedure FNP-1-ARP-1.9 as required was a performance deficiency (PD). This event was captured in the licensee's corrective action program with condition report (CR) 10280729. The licensee established a root cause evaluation team, identified the root causes, and implemented corrective actions (CAR 266911).

The PD was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone objective and adversely affected that objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically a manual reactor trip of Unit 1 as required by the ARP, would have prevented the automatic reactor trip and the automatic safety injection actuation. The significance of this finding was evaluated using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for findings at Power" dated June 19, 2012. This finding was determined to be of very low safety significance (Green) because, while this issue resulted in a reactor trip, it did not cause the loss of mitigation equipment relied upon to transition the plant from the onset of a trip to a stable shutdown condition. The inspectors determined the finding had a cross-cutting aspect of Procedure Adherence in the Human Performance area, because the ARP was not followed and the operations crew did not trip the reactor as required by the procedure. [H.8] Inspection Report# : [2016004](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Adequately Install an Oil Collection System on Reactor Coolant Pump Motors

Green: A NRC-identified NCV of 10 CFR 50.48(c) and National Fire Protection Association Standard 805 (NFPA 805), Section 3.3.12, was identified for the licensee's failure to comply with code requirements for design and installation of the Unit 1 Reactor Coolant Pump (RCP) oil collection system. The oil collection system did not include gaskets between the bolted joints on the RCP oil catch-basins, as required by the approved design for the Oil Spillage Protection System (OSPS). The licensee's failure to install gaskets on the Unit 1 RCP oil collection systems was a performance deficiency. The licensee was informed of the inspector observation and initiated CR 10289565. Gasket material was installed on all three RCPs on October 23, 2016, as documented on WO SNC464660, SNC459614, and

SNC406358.

The performance deficiency was more than minor because if left uncorrected, the inadequate installation of the RCP oil collection system presented a degradation of a fire confinement function to prevent oil to leak onto hot surfaces. The significance of this finding was evaluated using IMC 0609, Appendix F, "Fire Protection Significance Determination Process", dated September 20, 2013, because the performance deficiency affected fire protection defense-in-depth strategies involving fire confinement. Using IMC 0609, Appendix F, Attachment 1, "Fire Protection Significance Determination Process Worksheet," the inspectors determined that the finding was of very low safety significance (Green) because the exposed fire area contains no potential damage targets that are unique from those in the exposing fire area. The inspectors determined the finding had a cross-cutting aspect of Procedure Adherence in the human performance area because the vendor installing the oil catch-basins did not follow the RCP reassembly procedure which required gaskets between all bolted joints. [H.8] (Section 1R05)
 Inspection Report# : [2016004](#) (pdf)

Significance:  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Adequate NTTF Flooding Walkdowns

Green: A NRC-identified NCV of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, was identified because the licensee failed to identify and correct conditions adverse to quality associated with the flood protection design basis of the Unit 1 Auxiliary Building. Specifically, the licensee failed to identify missing conduit covers in electrical conduits that penetrate the Unit 1 auxiliary building below the flood protection design basis elevation of 154.5 feet (MSL). The inspectors determined that the failure to identify missing conduit covers in electrical conduits that penetrate the Unit 1 auxiliary building below the flood protection design basis elevation of 154.5 feet was a performance deficiency. The discovery of the missing conduit covers was captured in the licensee's corrective action program with CR 10273516. The licensee implemented WO SNC815778 to replace missing conduit covers. Corrective actions to inspect the remaining below grade pipe trenches are being developed and scheduled.

The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective of ensuring availability, reliability, and capability of systems that respond to initiating events. Specifically, flood water could enter the Auxiliary Building Lower Equipment Room through unsealed electrical conduits and render the TDAFW Pump inoperable. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process (SDP) For Findings At-Power," issued June 19, 2012, the inspectors utilized Section B, "External Event Mitigation Systems (Seismic/Fire/Flood/Severe Weather Degraded)," and Exhibit 4 of Appendix A and determined the finding did not involve a total loss of any safety function, identified through a PRA, IPEEE, or similar analysis, that contributes to external event initiated core damage accident sequences (i.e., initiated by a seismic, flooding, or severe weather event). The two motor driven AFW pumps are also located in the lower equipment room but are protected behind watertight doors and can satisfy the AFW safety function. Therefore, the finding screened to Green. The inspectors determined the finding had a cross-cutting aspect of Procedures in the human performance area because the licensee missed two opportunities to follow the NEI 12-07 guidance to evaluate the adequacy of the flood protection features below the design basis flood protection elevation. [H.8]

Inspection Report# : [2016004](#) (pdf)

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Comply with NFPA-13 for Pre-action Fire Suppression System 1A-36 and Provide NRC Staff

Complete and Accurate Information (1R05)

Green: An NRC-identified Severity Level IV NCV of 10 CFR 50.9(a), “Completeness and accuracy of information,” and an associated Green NCV of 10 CFR 50.48(c) and National Fire Protection Association Standard (NFPA) 805, Section 3.9.1, was identified for the licensee’s failure to accurately evaluate and report non-compliance with code requirements for the design and installation of the Unit 1 pre-action sprinkler system 1A-36. The licensee’s failure to comply with code requirements for the design and installation of the Unit 1 pre-action sprinkler system, 1A-36 was a performance deficiency. The licensee entered the issue into their corrective action program (CR 10261278).

The performance deficiency was more than minor because it was associated with the protection against external factors (i.e. fire) attribute of the Mitigating Systems cornerstone 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 inadequate design and installation of the sprinkler system represented a degradation of a fire suppression component which degraded the fire protection defense in depth element to rapidly detect and suppress fires that occur. The inspectors determined that the finding was of very low safety significance (Green) because the affected fixed fire suppression system would still be able to suppress a fire such that no additional equipment important to safety would be affected by a fire. The inspectors determined the cause of this finding was not associated with a cross-cutting area because it was not reflective of current licensee performance. (Section 1R05)

Inspection Report# : [2016003](#) (pdf)

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Requalification Examination Integrity (1R11)

Green: An NRC-identified non-cited violation (NCV) of 10 CFR 55.49, “Integrity of examinations and tests,” was identified for the licensee’s failure to adhere to examination procedure standards that require the use of sequestering and examination security measures to prevent compromise when the same examination is administered to multiple crews on the same day. While observing simulator exam scenarios, the inspectors identified that neither of two crews scheduled to be evaluated on the same scenario that day were sequestered following completion of the first scenario. Both crews were in the same building and were not being monitored. The first crew was placed on the same Examination Security Agreement as examination developers and evaluators prior to participating in the scenario, as a means to prevent compromise of the examination. The licensee Examination Security Agreement Brief allows discussion of the exam with individuals that are on the Examination Security Agreement. The inspectors informed the licensee of this issue prior to the same scenario being administered to the second crew. The licensee subsequently administered a different scenario to the second crew to prevent any potential examination compromise and entered the issue into their corrective action program (CR 10271868).

This performance deficiency was more than minor because it was associated with the Human 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.

Specifically, the failure to adhere to examination security standards adversely affected the integrity of the administration of the operating exams, which tests licensed operator performance in order to ensure timely and correct mitigating actions after an event. Using the Licensed Operator Requalification Significance Determination Process, this finding was determined to be of very low safety significance (Green) because no known compromise of the examinations occurred. The inspectors determined the finding had a cross-cutting aspect of Resources in the cross-cutting area of Human Performance because the licensee failed to ensure that adequate training procedures were available to meet industry standards and ensure that the potential for the compromise of regulatory examinations did not exist. [H.1] (Section 1R11)

Inspection Report# : [2016003](#) (pdf)

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Adequate Preventive maintenance on Circuit Breaker Cell Switch (4OA3.2)

Green: An NRC-identified, non-cited violation of Technical Specification (TS) 3.8.9 “Distribution Systems – Operating,” occurred when the shared 600 VAC 1-2R load center (LC) was inoperable for longer than allowed by technical specifications for Unit 1. The failure to perform adequate preventive maintenance on the ER05-2 circuit breaker cell switch in accordance with licensee procedure FNP-0-EMP-1322.01 was a performance deficiency. This event was entered in the licensee’s corrective action program as CR 10209365. The licensee cycled the ER05-2 cell switch which cleaned the electrical contact enough to establish continuity to power the closing circuit for the ER02-1 supply circuit breaker and reenergize the 1-2R 600VAC load center. An additional corrective action to replace the cell switch is pending.

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 because inadequate preventive maintenance on the ER05-2 circuit breaker cell switch led to the inability to detect a degraded electrical contact which resulted in the inoperability of the 1-2R 600 VAC load center on April 13, 2016. This finding required a detailed risk evaluation because it represented an actual loss of function of a single train for greater than the TS allowed outage time. The inspectors used the NRC SPAR model for plant Farley to evaluate the significance of this finding. The regional senior reactor analyst reviewed this evaluation and determined that the increase in risk as a result of the performance deficiency was less than 1E-6 per year, a GREEN finding of very low safety significance. This finding was associated with the cross-cutting aspect of Field Presence in the Human Performance area because if deviations from standards and expectations were corrected promptly, the practice of checking a single electrical contact during the cell switch continuity verification would not have existed. [H.2] (Section 4OA3)

Inspection Report# : [2016003](#) (*pdf*)

Significance:  Jun 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform TS Surveillance Requirements for Safety-Related Batteries (4OA2)

Green: An NRC-identified non-cited violation of Technical Specification (TS) 5.4.1 “Procedures”, was identified with two examples. The licensee failed to implement and maintain surveillance test procedures for surveillance requirements (SR) 3.8.4.4 and SR 3.8.4.2. As a result, the licensee failed to perform actions to satisfy TS surveillance requirements and the battery terminal fasteners corroded and degraded over time.

The licensee’s failure to implement and maintain procedure FNP-1-STP-905.0 to meet the surveillance requirements for the Unit 1 “1B” 125VDC auxiliary building battery was a performance deficiency. The performance deficiency were more than minor because, if left uncorrected, they had the potential result in excessive corrosion buildup on the battery cell-to-cell and terminal connections which could have led to the inability of the battery to perform its safety-related function. The significance of the finding was very low safety significance (Green) because it was not a design or qualification deficiency; it did not represent a loss of system safety function of a single train for greater than its Technical Specification allowed outage time; and it did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The inspectors determined the finding had a cross-cutting aspect of Resources in the Human Performance area, because the licensee’s leaders failed to ensure procedures used to conduct TS surveillance requirements for the “1B” 125 VDC auxiliary building battery were adequate and performed correctly. [H.1] (Section 4OA2)

Inspection Report# : [2016002](#) (*pdf*)

Significance:  Feb 04, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Verify Design Assumptions Associated with the Operation of the Atmospheric Relief Valves

Green. The NRC identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to verify design assumptions associated with the operation of the atmospheric relief valves (ARVs) following a steam generator tube rupture (SGTR). The licensee failed to verify that all credited methods of ARV operation as specified in procedure FNP-1-EEP-3, "Steam Generator Tube Rupture," Rev. 27 could be performed within the FSAR specified time limit of 30 minutes. Upon identification of the issue, the licensee initiated Technical Evaluation 952125 and conducted two simulated scenarios using the two credited means of operating the ARVs following a SGTR. The licensee was able to show that the actions could be performed within the specified time, although the time results were marginal and did not account for operator error or repeatability. This issue has been entered into the licensee's corrective action program as CR 10193323.

The performance deficiency was more than minor because it 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 not greater than green because it affected the design or qualification of a mitigating structure, system, or component (SSC), but the SSC maintained its operability or functionality as documented in CR 10193323. This finding was not assigned a cross-cutting aspect because the issue did not reflect current licensee performance. (Section 1R17.b)
Inspection Report# : [2016007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  May 03, 2016

Identified By: NRC

Item Type: VIO Violation

Inaccurate Training Records

Severity Level IV/Green: The licensee identified a violation of 10 CFR 50.9(a) requirements and an associated finding of very low significance when it was determined that an employee deliberately completed requalification examinations for other employees without their knowledge or consent. Specifically, on three occasions the proctor took annual requalification exams of Fitness-for-Duty, radiation worker, and fire watch training for two other contract employees and made inaccurate entries in training records thereby falsely indicating that the employees actually attempted and passed the examinations. The records inaccurately showed that workers had successfully completed required annual requalification exams for fire watch, fitness for duty and radiation worker training. The licensee was notified about the incident through their employee concerns program and informed the NRC about the concern.

Since the finding involved occupational radiation safety, the inspectors utilized IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, to assess its significance. The inspectors determined that the finding did not involve an overexposure; a substantial potential for an overexposure; a compromised ability to assess dose; or unplanned, unintended occupational collective dose. Consequently, the inspectors determined that the finding was of very low safety significance (Green).

The inspectors determined that the finding has a cross-cutting aspect in the area of human performance, field presence, because the licensee did not ensure management oversight of contractor work activities (H.2).

This issue was also dispositioned using traditional enforcement due to the willful aspects of the violation. Furthermore, the failure to provide complete and accurate information has the potential to impact the NRC's ability to perform its regulatory function. In accordance with the guidance of the Enforcement Policy and Enforcement Manual, this issue is considered a Severity Level IV violation because it involved information that the NRC required to be maintained by a licensee that was incomplete or inaccurate and of more than minor significance.

Inspection Report# : [2016008](#) (*pdf*)

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

Last modified : February 01, 2017