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## Millstone 2 – Quarterly Plant Inspection Findings

### 2Q/2017 – Plant Inspection Findings

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#### Initiating Events

Significance: **G** Aug 01, 2014

Identified By: NRC

Item Type: FIN Finding

#### Inadequate Implementation of Dominion's Design Change Process

The NRC identified a finding of very low safety significance (Green), in that Dominion did not ensure correct implementation of their design change process procedure when establishing licensing basis requirements for removal of the SPS. Specifically, Dominion did not correctly evaluate the impact of removing the system on the requirements of General Design Criterion (GDC) 17 and did not address the failure mechanism of this new design in the design change documents, as required by their design change procedure. Dominion entered this issue into the corrective action program for resolution (CR 553967 and CR 551068).

The team determined that Dominion's failure to implement their design change process procedure was a performance deficiency. This performance deficiency was more than minor because it was associated with the design control attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown and power operations. The team performed a risk screening in accordance with IMC 0609, Appendix A, "Significance Determination Process for Findings At-Power," using Exhibit 1, "Initiating Events Screening Questions," Section C, "Support System Initiators." The answer to the question in Section C would be NO, because the finding did not increase the likelihood of a loss of two transmission lines with one line out of service (OOS), and affect mitigation equipment. The team determined that this finding had a cross-cutting aspect in the area of Human Performance, Procedure Adherence, because the design change process procedure was not adequately followed, in that the impact of the change on the current design basis and licensing bases was not evaluated correctly [H.8]

Inspection Report# : 2014011 (*pdf*)

#### Mitigating Systems

**Significance:**  Mar 31, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Maintain CST Temperature in Accordance with Procedure Requirements**

The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement Operating Procedure (OP) 2319B, "Condensate Storage and Surge System." Specifically, Dominion failed to maintain the Millstone Unit 2 condensate storage tank (CST) temperature above procedural requirements. Dominion has documented this condition within their corrective action program (CAP) as condition report (CR) 1066291.

The inspectors determined this finding was more than minor as it adversely affected the protection from external factors 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. The reliability of the mitigating systems heat removal function was challenged based upon the reasonable doubt of lost operability of the CST to provide a sufficient supply of water to the auxiliary feedwater (AFW) system. There was reasonable doubt of lost operability due to indications of CST water temperature below OP 2319B prescribed limitations, winter temperatures falling, and an inability to restore CST recirculation system in a timely manner. The finding was determined to be of very low safety significance (Green), when all screening questions were answered "No" as the conditions discussed in the Dominion engineering evaluation, approved on January 7, 2017, were capable of showing that no safety systems or functions were lost. This finding has a cross-cutting aspect in the Problem Identification and Resolution, Resolution, in that Dominion did not take effective corrective actions or corrective maintenance to address CST recirculation pump degradation in a timely manner, prior to the onset of winter, commensurate with their safety significance such that operations could maintain CST water temperature above procedurally defined limitations.

Inspection Report# : 2017001 (*pdf*)

**Significance:**  Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Routine Failure to Perform Engineering Evaluation of Long Term Scaffolding**

The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement procedure MA-AA-105, "Scaffolding," Revision 17. Specifically, Dominion routinely failed to perform engineering evaluations of long term scaffolding installed in the plant for greater than 90 days. Dominion has documented this condition within their corrective action program (CAP) as condition report CR1049493.

The inspectors determined that this finding was more than minor as it represents the routine failure to perform 10 CFR 50.59 engineering evaluations consistent with the requirements of procedures MA-AA-105 and CM-AA-400 which if left uncorrected, would have the potential to lead to a more significant safety concern as informed by IMC 0612, Appendix E, "Examples of Minor Issues," example 4.a. The finding screened to be of very low safety significance (Green), when all screening questions were answered "No" as the conditions identified did not challenge safety system functions. This finding has a cross-cutting aspect in the Problem Identification and Resolution, cross-cutting area associated with Resolution, in that under CR1049057, Dominion did not take effective corrective action to resolve and correct the identified gaps in the tracking and assessment of scaffolding installed for greater than 90 days as directed by MA-AA-105 and CM-AA-400, resulting in three further failures to evaluate long term scaffolding identified by the inspectors in the Unit 2 'A' Safeguards Room.

Inspection Report# : 2016004 (*pdf*)

**Significance:** G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Maintain Licensed Operator Examination Integrity**

The inspectors identified an NCV of 10 CFR 55.49, "Integrity of Examinations and Tests," for the failure of the licensee to ensure that the integrity of an operating test administered to licensed operators was maintained. During the annual operating exam, 19 of the Unit 2 licensed operators received more than two of five job performance measures (JPMs) (>50 percent) for their operating tests that had been administered to other licensed operators in previous weeks of the same exam cycle. This failure resulted in a compromise of examination integrity because it exceeded the Dominion Nuclear Fleet Procedure TR-AA-730, "Licensed Operator Biennial and Annual Operating Requalification Exam Process," Revision 9, requirement to repeat less than or equal to 50 percent of the JPMs during the exam cycle. However, this compromise did not lead to an actual effect on the equitable and consistent administration of the examination. This issue was entered into Dominion's CAP as CR1056308.

The failure of Dominion's training staff to maintain the integrity of examinations administered to licensed operations personnel was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, the performance deficiency could have become more significant in that allowing licensed operators to return to the control room without valid demonstration of appropriate knowledge on the biennial examinations could be a precursor to a more significant event. Using IMC 0609, "Significance Determination Process," and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance (Green) because although the finding resulted in a compromise of the integrity of operating test JPMs and compensatory actions were not immediately taken when the compromise should have been discovered in 2016, the equitable and consistent administration of the test was not actually impacted by this compromise. This finding has a cross-cutting aspect in the area of Human Performance associated with Field Presence, because the licensee failed to ensure that deviations from standards and expectations are corrected promptly such that the 50 percent maximum limit on repeated JPMs was not exceeded. Specifically, Dominion supervisory review and approval of the original examination plan and subsequent changes to that plan could have discovered the deviation from standards and expectations.

Inspection Report# : 2016004 (*pdf*)

**Significance:** G Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Review Standing Orders**

The inspectors identified a Green NCV of Technical Specification (TS) 6.8.1.a, for Dominion's failure to implement procedures as required by Regulatory Guide 1.33, Revision 2, Appendix A.1, "Administrative Procedures", during the performance of watch turnover. This resulted in multiple operators across multiple crews in both Unit 2 and 3 standing watch without performing a review of the applicable standing orders for up to 4 months from March to July 2016. Dominion entered the condition in their corrective action program (CAP) as condition report (CR)1042287.

The inspectors determined that the finding was more than minor because if left uncorrected the performance deficiency could lead to a more significant event. Specifically, the operators did not review TS amendments, emergency action level classifications, emergency operating procedures, and plant computer issues impacting the plant prior to taking watch. Without reviewing the standing orders to understand the information contained within, operators could potentially take improper actions to control the plant during evolutions and abnormal conditions. The finding was determined to be of very low safety significance (Green) because it did not affect design or qualification of a mitigating

structure, system, and component (SSC), did not represent a loss of system function, and did not involve external event mitigation systems. The inspectors determined that the finding has a cross-cutting aspect in the Human Performance cross-cutting area associated with Field Presence, where leaders are commonly seen in the work areas of the plant observing, coaching, and reinforcing standards and expectations. Specifically, Dominion leadership observations in the control room or management review of monthly standing order audits could have discovered the deviation from standards and expectations.

Inspection Report# : 2016003 (*pdf*)

**Significance:**  Aug 11, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Unapproved OMA in Lieu of Meeting III.G.2 Fire Protection Requirements for Fire Area R-14, Lower 4kV Switchgear Room and Cable Vault**

The team identified a finding of very low safety significance (Green) involving a non-cited violation of Millstone Power Station, Unit 2, Renewed Facility Operating License Condition 2.C.(3) to implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report (FSAR). Specifically, Dominion failed to maintain the #2 steam generator (SG) atmospheric dump valve (ADV) free from fire damage, which may have affected the availability to maintain hot shutdown conditions from the main control room for a fire in Fire Area R-14, Lower 4.16kV Switchgear Room and Cable Vault. Dominion promptly entered this safe shutdown issue into their corrective action program as condition report (CR) 1043458. Immediate corrective actions included implementing compensatory measures in the form of fire watches for fire area R-14 that are being tracked by Reasonable Assurance of Safety (RAS) determination 3037040. Longer term corrective actions included submitting an exemption request to the NRC for use of a local operator manual action (OMA) to operate the #2 SG ADV in lieu of meeting fire protection requirements for fire area R-14. The team considered Dominion's immediate and longer term corrective actions appropriate.

The performance deficiency was more than minor because it affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to an external event to prevent undesirable consequences in the event of a fire. Specifically, the use of an OMA during post-fire safe shutdown is not as reliable as normal systems operation which could be utilized had the requirements of 10 CFR Part 50, Appendix R, Section III.G.2 been met and, therefore, prevented fire damage to credited components and/or cables, specifically the #2 SG ADV. The inspectors used IMC 0609, Appendix F, Fire Protection Significance Determination Process, Phase 1 and determined the reactor is able to reach and maintain a hot safe shutdown condition because the SG ADVs are used for transition to cold shutdown, therefore this finding was of very low safety significance (Green). This finding does not have a cross cutting aspect because the performance deficiency occurred greater than three years ago when the June 30, 2011 exemption request letter to the NRC was supplemented by letter on February 29, 2012, and is not indicative of current licensee performance.

Inspection Report# : 2016008 (*pdf*)

**Significance:**  Jul 22, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Take Corrective Action to Preclude Repetition of the Condition that Caused Premature Failure of a Battery Cell**

The inspectors identified a finding of very low safety significance involving a NCV of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action," for Dominion's failure to take corrective actions to preclude repetition of a

significant condition adverse to quality. On February 26, 2014, Millstone Unit 2 station battery '201B,' cell 27, failed, which was screened as a significant condition adverse to quality in accordance with Dominion's procedures. Dominion evaluated the issue and identified three potential causes but did not institute corrective actions to preclude repetition. Dominion entered the issue into the corrective action program as condition report CR1041881.

This finding is more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because it was associated with the equipment performance 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, absent corrective actions to preclude repetition of the cause of the failure of battery '201B,' cell 27, the objective to ensure the reliability of safety related direct current (dc) battery systems was adversely affected. The inspectors also observed conditions which were consistent with precursors to the potential failure modes identified by Dominion that were not previously entered into a tracking database or the corrective action program. In accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Initial Characterization of Findings," and IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions", Section A, "Mitigating Systems, Structures or Components and Functionality," the finding screened to be of very low safety significance (Green), because the finding did not represent an actual failure of a system, function, or train of equipment and did not involve equipment specifically designed to mitigate a seismic, flooding, or severe weather initiating event (e.g., seismic snubbers, flooding barriers, tornado doors). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Challenging the Unknown, because Dominion identified three potential causes and when faced with an uncertain condition decided to not take corrective action to preclude repetition.

Inspection Report# : 2016009 (*pdf*)

## **Barrier Integrity**

## **Emergency Preparedness**

## **Occupational Radiation Safety**

## **Public Radiation Safety**

## **Security**

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

## **Miscellaneous**

Current data as of : September 05, 2017

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