

Millstone 3

3Q/2013 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

NCV 05000423/2013003-02, Failure to Establish Measures for the Identification and Control of Design Interfaces and for Coordinating among participating design organizations

•Green. The inspectors noted a self-revealing Green NCV of 10 CFR 50, Criterion III, “Design Control,” when Dominion’s did not adequately implement established measures for the identification and control of design interfaces and for coordinating among participating design organizations. Specifically, Dominion failed to properly require a temporary modification for a work activity that met the design requirements of CM-AA-TCC-204, “Temporary Configuration Changes,” when workers installed an air line jumper that caused an AOV to open and led to an uncontrolled loss of RCS inventory. Dominion entered the issue into their CAP as CR511856.

The finding is more than minor because it is associated with the design control attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown operations. Specifically, Dominion failed to properly implement a temporary modification which ultimately led to the uncontrolled loss of RCS inventory. The finding was of very low safety significance (Green) because the charging system had sufficient capacity to maintain pressurizer level, the leakage would not have caused the loss of the running residual heat removal (RHR) pump for a substantial period of time, and at least one steam generator (SG) remained available. The finding had a cross-cutting aspect in Human Performance, Work Practices, because Dominion failed to ensure supervisory and management oversight of work activities such that nuclear safety is supported. Specifically, the station did not maintain control of activities in accordance with plant procedures [H.4(c)]. (Section 1R20)

Inspection Report# : [2013003](#) (*pdf*)

Mitigating Systems

Significance:  Aug 08, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336, 423/2013010-03, Failure to Maintain Cold Shutdown Material On-Site

•Green. The team identified a finding of very low safety significance, involving a non-cited violation of Millstone Unit 2 Operating License Condition 2.C. (3) and Unit 3 Operating License Condition 2.H for the failure to implement and maintain all aspects of the approved Fire Protection Program. Specifically, Dominion used large motors, pre-staged in the on-site warehouse for Appendix R cold shutdown (CSD) repairs, as spare parts to accomplish preventative maintenance tasks. As a result, Dominion could not have performed the designated CSD repairs and achieved CSD conditions within 72 hours as required for both Units 2 and 3 during the time period that the old motors were off-site for refurbishment. In addition, Dominion had not taken any compensatory measures to reduce the

likelihood of a fire or its consequence, in lieu of not having required repair material on-site. Dominion entered these issues into its corrective action program as condition reports 522722, 522740, 522848, and 522850 and has planned corrective actions to ensure CSD repair material is never intentionally made unavailable or removed from the site.

This finding was more than minor because it was associated with the Protection Against External Factors (e.g., fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Significance Determination Process (SDP) screening, in accordance with NRC Inspection Manual Chapter 0609, Appendix F, and "Fire Protection Significance Determination Process." This finding screened to very low safety significance in Phase 1 of the SDP because it only affected the ability to reach and maintain cold shutdown conditions. This finding did not have a cross-cutting aspect because it was a legacy issue and was considered to not be indicative of current licensee performance. (Section 1R05.05.9)

Inspection Report# : [2013010](#) (*pdf*)

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2013003-01, Failure to Implement Annunciator Response Procedure for a Loss of Ventilation during a Battery Charge

•Green. The inspectors identified a NCV of Technical Specification (TS) 6.8.1, "Procedures and Programs," for failing to implement Annunciator Response Procedure (ARP) OP 3353VP1B1-4 (BATT ROOM 1, 3, 5, EXHAUST FAN FLOW LOW) and stop the equalizing battery charge that was occurring on three batteries to prevent the buildup of hydrogen gas in the Unit 3 east switchgear room when room ventilation was stopped. After a period of two hours, Dominion stopped the equalizing charge and entered the issue into their CAP as CR511856 and CR519744.

The performance deficiency is more than minor because it affected the protection against external factors attribute of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events, such as fire, to prevent undesirable consequences (i.e. core damage). Specifically, Dominion failed to properly implement the ARP which allowed the potential build-up of hydrogen gas to occur in the east switchgear room. A hydrogen fire in the east switchgear room would have disabled numerous safety-related systems and potentially injured personnel during a time when the plant was in a yellow shutdown risk state based on RCS decay heat removal and power availability. The inspectors determined this finding to be of very low safety significance (Green) because train 'B' was protected and RHR loop 'B' was in operation providing core cooling. Train 'B' components and systems were physically isolated in the west switchgear room. The finding has a cross-cutting aspect in the area of Human Performance, Work Practices, because Dominion did not effectively communicate expectations regarding personnel following procedures [H.4(b)]. (Section 1R13)

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Feb 15, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2013007-01, Failure to Verify 480VAC MCC Starters Had Adequate Control Voltage to Operate Under All Design Conditions

Green. The team identified a finding of very low safety significance involving a non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control," in that Dominion did not verify that Unit 3 safety-related motor control center (MCC) starters had adequate control voltage to

operate under all design conditions. Specifically, Dominion did not use the minimum voltage that would be available at Unit 3 MCCs during the most limiting block starting of large electrical loads during a Unit 3 loss of coolant accident (LOCA) as the design input for the minimum voltage under which an MCC starter was required to operate, to ensure that the starter's contactor would close when Unit 2 off-site power is cross-tied to Unit 3. In response, Dominion entered the issue into their corrective action program and issued an Operations Standing Order to ensure that the off-site electrical distribution system would not be placed in a configuration that would allow a lower minimum voltage than what was previously analyzed for the MCC starters until the issue was resolved. The finding was more than minor because it was similar to Example 3.j of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," because without verification that the components would operate at the lowest potential voltage possible, the team had reasonable doubt with the operability of the associated components. In addition, the finding was associated with the Design Control attribute of the Mitigating Systems cornerstone and affected the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," a Region I Senior Reactor Analyst (SRA) conducted a detailed risk evaluation. Since the ability of the MCC starters to function under the worst case conditions could not be verified during the inspection period, a detailed risk evaluation was determined to be appropriate. Results of the evaluation demonstrated that the initiating event frequency was substantially below 1E-6, and therefore, the SRA concluded the finding to be of very low safety significance (Green).

This finding had a cross-cutting aspect in the area of Human Performance, Decision Making, because, in the design of a Unit 3 480 volts alternating current (VAC) MCC starter modification, Dominion did not use a conservative or bounding value as a design input for the minimum voltage under which a component might be required to operate.

[IMC 0310, Aspect H.1(b)] (1R17.2.1)

Inspection Report# : [2013007](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2012005-02, Failure to Establish Proper Test Controls for the Wide Range Logarithmic Post Accident Neutron Flux Monitors

Green. The inspectors identified an NCV of 10 CFR 50, Appendix B, Criteria XI, Test Control, associated with the Barrier Integrity cornerstone. Specifically, Dominion did not ensure that the wide range logarithmic post accident neutron monitor system was properly calibrated as required by Technical Specification (TS) 3.3/4.3.6, "Accident Monitoring Instrumentation," to ensure all surveillance test acceptance criteria had been fully met on August 10, 2011. Dominion entered the issue into their corrective action system (CR442297) and repaired and realigned the Gamma Metrics LOG WR Monitor instrument drawer, and retrained the instrument and controls (I&C) department regarding surveillance and test control procedures.

This finding was determined to be more than minor because it is associated with the human performance attribute of the barrier integrity cornerstone and affected the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding) protect the public from radionuclide releases caused by accidents or events. The finding was determined to be of very low significance (Green) because the issue only affected the fuel barrier. This finding has a cross-cutting aspect in the area of human performance, work practices component because the licensee did not ensure that surveillance work activities were appropriately reviewed by supervision. [H.4(c)] (Section 40A3)

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

Emergency Preparedness

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2013003-03, Failure to make a 10 CFR 50.72(b)(3)(v) report for a major loss of emergency assessment capability for the stack radiation monitor

•Severity Level IV. The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(xiii) for the failure to make the required initial notification to the NRC within eight hours of a major loss of monitoring capability. On April 16, Dominion declared the main station stack radiation monitor inoperable but did not report this to the NRC until the inspectors questioned the control room operators on April 18. Dominion evaluated the condition and made the required notification (NRC event report number 48941) on April 18, 2013, and entered the issue into their corrective action program (CAP) as CR512007.

The inspectors determined that Dominion did not notify the NRC of a major loss of emergency assessment capabilities event in the time required by 10 CFR 50.72. The inspectors determined the finding was subject to traditional enforcement because Dominion's failure to make a required report could potentially impact the NRC's regulatory function. This finding is similar to the one described in NRC Enforcement Policy, Section 6.9.d(9), "A licensee fails to make a report required by 10 CFR 50.72 or 10 CFR 50.73," which corresponds to Severity Level IV. In accordance with guidance contained in IMC 0612, "Power Reactor Inspection Reports", Section 07.03, cross-cutting aspects are not assigned to traditional enforcement violations. (Section 40A3)

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Oct 29, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336/2012005-01 and 05000423/2012005-01, Failure to Adequately Implement Flooding EALs

Green. The inspectors identified an NCV associated with emergency preparedness (EP) planning standard 10 CFR 50.47(b)(4), and the requirements of Sections IV.B and IV.C of Appendix E to 10 CFR Part 50. Specifically, Dominion did not maintain in effect the Millstone Units 2 and 3 emergency action level (EAL) schemes by failing to provide an effective measuring instrument for determining flooding water levels. These deficiencies adversely affected the ability of the licensee to properly classify events involving a major flood condition. Dominion entered the issue into their corrective action system (CR501482) and provided additional means to determine flood water levels.

The finding is more than minor because it is associated with the Facilities and Equipment attribute of the EP Cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate

measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors determined the finding to be of very low safety significance (Green) because an EAL has been rendered ineffective such that a Notification of Unusual Event (NOUE) would not be declared for a flooding event, but because of other EALs, an appropriate declaration could be made in a degraded manner. The finding has a cross-cutting aspect in the area of Human Performance, Resources, in that Dominion personnel did not take provide appropriate procedures to address a Risk-Significant Planning Standard (RSPS) issue completely, accurately, and in a timely manner commensurate with the safety significance because Dominion did not provide a means of reliably and accurately assessing flooding levels that could reach 19 feet above mean sea level. [H.2(d)] (Section 1R01)

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

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

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