

# Millstone 3

## 1Q/2011 Plant Inspection Findings

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### Initiating Events

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: FIN Finding

**FIN 05000423/2010003-03, Reactor Trip Caused by Loss of Positive Control of Steam Generator Level**

•Green. A self-revealing finding (FIN) of very low safety significance was identified for Dominion's failure to implement effective corrective actions for known degraded conditions associated with the steam generator (SG) water level control system. Specifically, the instrument control system for the feed regulating bypass valves (FRBV) had not been adequately designed and maintained. The degraded adverse conditions had not been corrected despite prior opportunities. The combination of these degraded conditions led to a reactor trip on May 17, 2010. Dominion entered this issue into their corrective action program.

This finding is more than minor because it was similar to NRC IMC 0612, Appendix E, "Examples of Minor Issues," Example 4F, in that the failure to correct a condition adverse to quality resulted in a reactor trip. It is associated with the Equipment Performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding has very low safety significance (Green) because it did not affect the likelihood that mitigation equipment or functions would not be available. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program because Dominion did not take appropriate corrective actions to address the longstanding adverse conditions associated with control of the FRBVs. [P.1(d)] (Section 71111.20).

Inspection Report# : [2010003](#) (*pdf*)

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### Mitigating Systems

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV 05000423/2011002-01, Failure to Prevent Safety Related Cables from Being Submerged**

Green. A self-revealing Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified for Dominion's failure to maintain safety related cables in an environment for which they were designed. Specifically, 480V safety related cables, which are not qualified for continuous submergence, were submerged in a cable vault for an undetermined length of time. Dominion took immediate corrective action to remove the water from the cable vault and entered the issue into their corrective action program (CAP).

The finding is more than minor because it was associated with the Protection Against External Events 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 of very low safety significance (Green) because the finding was not a design or qualification deficiency which resulted in a loss of operability or functionality, did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its technical specification allowed outage time, did not represent an actual loss of safety function of one or more non-technical specification trains of equipment designated as risk-significant for greater than 24 hours, and was not potentially risk significant due to a seismic, flooding or severe weather initiating event. The inspectors determined that the performance deficiency had a cross-cutting aspect in the

area of Problem Identification and Resolution, Operating Experience (OE), because Dominion did not implement OE through changes in the stations programs for inspecting underground cables. [P.2(b)] (Section 1R06)

Inspection Report# : [2011002](#) (*pdf*)

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV 05000423/2011002-02, Improper Restoration of Air Conditioning Equipment Following Maintenance Results in Inoperability of 'B' Train of Recirculation Spray System**

Green. A self-revealing Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for Dominion's failure to properly restore 3HVQ\*ACUS2B, Containment Recirculation Pumps and Coolers Area B Air Conditioning Unit, following maintenance. This resulted in an additional 24 hours of inoperability of the 'B' train of the recirculation spray system (RSS). Dominion's entered the issue into their corrective action program.

The finding is more than minor because it was similar to NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4b in that not following written instructions in the tagging cover sheet caused the 'B' train of RSS to be inoperable for an additional 24 hours. The finding was associated with the Human Performance 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 of very low safety significance (Green) because the finding did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its technical specification allowed outage time, did not represent an actual loss of safety function of one or more non-technical specification trains of equipment designated as risk-significant for greater than 24 hours, and was not potentially risk significant due to a seismic, flooding or severe weather initiating event. The inspectors determined that the performance deficiency had a cross-cutting aspect in the area of Human Performance, Work Practices, because operations personnel did not follow the instructions on the tagging cover sheet when returning the air conditioning unit to service. [H.4(c)] (Section 1R19)

Inspection Report# : [2011002](#) (*pdf*)

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**(NCV 05000423/2010005-01, Failure to Take Adequate Corrective Actions for a Broken JW Banjo Bolt on the 3B EDG).**

Green. The inspectors identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Dominion did not take adequate corrective action following the identification of a degraded condition. Maintenance personnel identified a broken jacket water fitting (banjo bolt) on the 3'B' emergency diesel generator (EDG), but a condition report (CR) was not initiated. Subsequently, an additional similarly degraded fitting resulted in extended unavailability on the 3'B' EDG. In response, Dominion entered the issue into the corrective action program and implemented acceptable corrective actions.

The finding is more than minor because it is 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 inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent an actual loss of system safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Dominion did not ensure that issues potentially impacting nuclear safety were promptly identified, fully evaluated, and that actions were taken to address safety issues in a timely manner, commensurate with their safety significance. Specifically, Dominion did not initiate a CR in September 2009 for a degraded condition on

the safety-related 3'B' EDG (IMC 0310, Aspect P.1(a)). (Section 405A)

Inspection Report# : [2010005](#) (pdf)

**Significance:**  Sep 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV 05000336/2010008-01; 05000423/2010008-01, Failure to Properly Control Fire Fighting Strategies.**

Green. The team identified 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 all provisions of the approved Fire Protection Programs. Specifically, Dominion did not implement adequate review, approval and distribution of fire fighting strategies to provide for the adequate development and maintenance of effective strategies. As a result, the team found that Dominion did not provide adequate guidance in the fire fighting strategies for several areas that included the Unit 2 "8" emergency diesel generator (EDG) room, and the Unit 3 west switchgear room. This issue was entered into Dominion's corrective action program as condition report (CR) 388786. The team determined that the failure to administratively control fire fighting strategies as required by the fire protection program was a performance deficiency. This finding was more than minor because it adversely affected the availability and capability objectives of the protection against external events (i.e., fire) attribute under the Mitigating Systems Cornerstone. Specifically, the above examples would likely cause delays in manual fire fighting activities and, therefore, adversely affected the defense-in-depth aspect of the fire protection program to limit fire damage by quick suppression of those fires that occur. The team performed a Phase 1 SDP screening, in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected fire prevention and administrative controls, and was screened to very low safety significance (Green) because this failure to control fire fighting strategies was determined to represent a low degradation rating. This finding had a cross-cutting aspect in the area of human performance because Dominion failed to ensure complete and accurate fire fighting strategies were available to the fire brigade to support timely extinguishment of fires. [H.2(c)] (Section 1 R05.03)

Inspection Report# : [2010008](#) (pdf)

**Significance:**  Sep 22, 2010

Identified By: NRC

Item Type: VIO Violation

**Failure to develop a mitigation strategy for depressurization of the Unit 3 steam generators and use a portable pump for injection make-up.**

This finding, affecting the Mitigating Systems Cornerstone, is related to developing a strategy to maintain core cooling and mitigate fuel damage, under the circumstances associated with loss of large areas of the plant due to explosions or fire; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution (Corrective Action Program). [P.1(c)]. See inspection report for more details.

Inspection Report# : [2010011](#) (pdf)

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV 05000423/2010003-02 Charging Pump Overheating and Cavitation during RCS Loop Vacuum Fill**

•Green. A self-revealing NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings", was identified for Dominion's failure to have an adequate procedure for starting the charging pumps. Specifically, OP

3304A, “Charging and Letdown,” did not require verification of Reactor Plant Closed Cooling Water (RPCCW) flow to the seal water heat exchanger. On May 1, 2010, Dominion started the “B” centrifugal charging pump without cooling water supplying the seal return heat exchanger. This caused the charging pump to overheat and cavitate, and resulted in the pump being declared inoperable. Dominion entered this issue into their corrective action program.

This finding was more than minor because it was associated with the configuration control 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 to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance (Green) because it did not result in a loss of safety function, a loss of safety function of a single train for greater than its technical specification allowed outage time, or a loss of risk significant non-technical specification train of equipment. Additionally, it is not risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a cross-cutting aspect in the area of Human Performance, Work Control because Dominion relied on the work control process to assure that the RPCCW cooling water was in service to the seal water heat exchanger at the time that the RCS loop vacuum fill was scheduled. The work control process was insufficiently robust to ensure that cooling water was supplied to the seal water heat exchanger during charging pump operations. [H.3.b]. (Section 71111.20)

Inspection Report# : [2010003](#) (*pdf*)

**Significance: SL-IV** Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV 05000423/2010003-01, Failure to Make a 10 CFR 50.72 (b)(3)(v)(c) Report for an Inoperable Secondary Containment**

•Severity Level IV. The inspectors identified a NCV of 10 CFR 50.72 “Immediate Notification Requirements for Operating Nuclear Power Reactors” for Dominion’s failure to make a timely eight-hour report for a condition that, at the time of discovery, could have prevented secondary containment from fulfilling its safety function. Dominion took immediate corrective action to restore operability of secondary containment, initiated a 10 CFR 50.72 Report and entered the issue into their corrective action program.

Per NRC Enforcement Policy Supplement I- Reactor Operations, Example D.4, a failure to make a required Licensee Event Report (LER) is categorized as a Severity Level IV violation. The inspectors considered Dominion’s failure to make the required 50.72 report for 5 days to meet the intent of this example. This finding has a cross cutting aspect in the area of Human Performance, Decision Making, because Dominion did not use conservative assumptions in their decision making when they could not demonstrate that secondary containment would provide its safety function.[H.1 (b)] (Section 71111.04)

Inspection Report# : [2010003](#) (*pdf*)

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## Barrier Integrity

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

Last modified : June 07, 2011