

Millstone 2

4Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336/2013005-02, Inadequate Alternative Shutdown Procedure

• Green. The inspectors identified an NCV of Millstone Unit 2 Operating License Condition 2.C. (3) for failure to implement and maintain all aspects of the approved Fire Protection Program (FPP). Specifically, Dominion had not adequately implemented an alternative shutdown procedure, as required by 10 CFR 50, Appendix R, Section III.L.3 and the approved FPP. The procedure for a Unit 2 fire, which could lead to control room abandonment, did not ensure the electrical distribution system was correctly configured prior to re-energizing alternating current (AC) buses. As a result, an over-current condition could occur and trip the 4 kilovolt (kV) supply breaker complicating safe shutdown operations and delaying AC bus recovery. In response to this issue, Dominion promptly revised their fire safe shutdown operating procedure prior to the end of the inspection to correct this deficiency.

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 inspectors evaluated the finding in accordance with IMC 0609, Appendix F, "Fire Protection SDP." This finding affected the post-fire safe shutdown category and was determined to have a high degradation rating because the alternative shutdown procedure lacked adequate instructions to ensure correct equipment alignment. A Phase 3 SDP analysis determined that this finding was of very low safety significance (Green) because the best estimate of core damage frequency (? CDF) was in the mid E-7 per year range. This finding did not have a cross-cutting aspect because it was considered to not be indicative of current licensee performance. (Section 40A5.1)

Inspection Report# : [2013005](#) (*pdf*)

Significance:  Aug 08, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336/2013005-01, Inadequate Alternative Shutdown Procedure

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) for failure to implement and maintain all aspects of the approved Fire Protection Program (FPP). Specifically, Dominion had not adequately implemented an alternative shutdown procedure, as required by 10 CFR 50 Appendix R Section III.L.3 and the approved FPP. The procedure for a Unit 2 fire which could lead to control room abandonment did not ensure the electrical distribution system was correctly configured prior to re-energizing AC buses. As a result, an over-current condition could occur and trip the 4kV supply breaker complicating safe shutdown operations and delaying AC bus recovery. In response to this issue, Dominion

promptly revised their fire safe shutdown operating procedure prior to the end of the inspection to correct this deficiency.

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 evaluated the finding in accordance with NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)." This finding affected the post-fire safe shutdown category, and was determined to have a high degradation rating because the alternative shutdown procedure lacked adequate instructions to ensure correct equipment alignment. A Phase 3 SDP analysis determined that this finding was of very low safety significance (Green) because the best estimate of core damage frequency was in the mid E-7 per year range.

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 40A5.1

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

Significance:  Aug 08, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336/2013010-02, Spurious Operation of Pressurizer Spray Valves Not Analyzed

•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) for failure to implement and maintain all aspects of the approved Fire Protection Program. Specifically, Dominion's safe shutdown methodology postulated spurious operation of the pressurizer spray valves, but had not analyzed the effect of the spurious operations and mitigation actions were not implemented to ensure operators could achieve safe shutdown if the spray valves spuriously opened. In response to this issue, Dominion revised their fire safe shutdown operating procedure prior to the end of the inspection to mitigate spurious opening of the spray valves.

The finding was more than minor because it was similar to Example 3.k of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, and was associated with the Protection Against External Factors (e.g., Fire) attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Significance Determination Process (SDP) screening, in accordance with IMC 0609, Appendix F, and "Fire Protection Significance Determination Process." This finding affected the post-fire safe shutdown category, and was determined to have a low degradation rating because a subsequent evaluation determined that that the performance requirements of Appendix R Section III.L.1 were satisfied. 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 1R05.05.2)

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

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:  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000336/2013002-01: Inadequate Post Maintenance Testing Following PORV Maintenance

Green. The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion XI, "Test Control," for Dominion's failure to perform an adequate post maintenance test (PMT) on 2-RC-404, the Unit 2 'B' power operated relief valve (PORV). Specifically, a stroke test of the valve under hot conditions was not performed prior to entering Mode 3. Since the valve was observed to be leaking, Dominion cooled down the plant to repair the PORV and performed the specified PMTs including the valve stroke under hot conditions. Dominion entered the issue into their corrective action program (CAP), CR506539.

The finding is more than minor because it is associated with the Human Performance 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. Specifically, Dominion's PMT of the PORV did not adequately demonstrate the valve's capability to stroke under all operating conditions. The finding was of very low safety significance (Green) because the finding did not represent an actual loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its technical specification (TS) allowed outage time, did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with Dominion's maintenance rule program for greater than 24 hours, and did not involve a loss or degradation of equipment designed to mitigate a seismic, flooding, or severe weather initiating event. The finding had a cross-cutting aspect in Human Performance, Work Control, because Dominion did not adequately incorporate actions to address the impact of work activities on plant operation. Specifically, Dominion incorrectly concluded that the PORV functional test was not required prior to entering Mode 3 [H.3(b)]. (Section 40A2)

Inspection Report# : [2013002](#) (*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

Last modified : February 24, 2014