

Millstone 3

4Q/2012 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Aug 03, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2012010-02 Failure to Take Prompt and Effective Corrective Actions to Address TDAFW Pump Trip Latch Mechanism Degradation

Green. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criteria XVI, "Corrective Action," for Dominion's failure to take prompt and effective corrective actions for conditions adverse to quality involving degradation of the Unit 3 turbine driven auxiliary feedwater (TDAFW) pump trip latch mechanism. Dominion did not identify the cause of the trip latch mechanism degradation until after multiple surveillance test failures had occurred. In response to questions from NRC inspectors, Dominion performed additional troubleshooting and determined that the linkage was not properly lubricated, and the linkage impact gap was out of adjustment. Dominion lubricated and adjusted the linkage, and declared the TDAFW pump operable after a successful retest.

The inspectors determined that this issue was more than minor because it is similar to the more than minor example 4.f of Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues." Additionally, the finding was 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 (i.e., core damage). The finding was determined to be of very low safety significance (Green) because the finding does not represent a loss of system and/or function, does not represent an actual loss of function of at least a single train for greater than its technical specification allowed outage time or two separate safety systems out-of-service for greater than its technical specification allowed outage time, and does 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 the licensee's Maintenance Rule program for greater than 24 hrs. The inspectors determined that this finding had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not thoroughly evaluate the problem such that the resolution addressed the causes [P.1(c)].

Inspection Report# : [2012010](#) (*pdf*)

Significance: G Jun 30, 2012

Identified By: NRC

Item Type: FIN Finding

FIN 05000423/2012003-01, Inadequate Operability Determination for 3FWS*CTV41 Feedwater Isolation Valve Hydraulic Actuators.

Green. An NRC identified finding (FIN) of very low safety significance (Green) was identified for Dominion's failure to adequately assess the operability of the Unit 3 Feedwater isolation valves, 3FWS*CTV41A, B, C and D in accordance with OP-AA-102-1001, "Development of Technical Guidance Basis to Support Operability Determinations," and C OP 200.18, "Time Critical Operator Action Validation and Verification." Specifically, Dominion did not properly validate or credit manual operator actions to isolate the main feedwater lines during a feedline break inside containment as a compensatory measure for degraded hydraulic valve actuators. Dominion entered this issue into their corrective action program (CAP), and conducted a reanalysis of the operability

determination.

The finding is more than minor because it is similar to NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," Example 3.k; in that the inadequate assessment of operability resulted in a condition where there was a reasonable doubt on the operability of the FWI function and the feedwater isolation valves. This issue is associated with the Equipment 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. Specifically, Dominion did not explicitly take credit for manual operator actions to trip the main feedwater pumps as a compensatory measure for the degraded capability of the 3FWS*CTV41 feedwater isolation valves to perform their safety function during a feedline break event inside containment. The inspectors conducted a phase 1 screening in accordance with IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance.

The inspectors did not assign a cross cutting aspect to this finding because the finding was not reflective of current performance. Operability determination OD000237 was completed in 2009 and OP-AA-102-1001 does not require periodic reassessment of active operability determinations.

Inspection Report# : [2012003](#) (*pdf*)

Significance:  Sep 22, 2010

Identified By: Self-Revealing

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*)

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)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2012002-01, Inadequate Post Maintenance Test Directions following Design Change to 3HVC*FN1B

Green. The inspectors identified an NCV of 10 CFR 50 Appendix 'B' Criteria V "Instructions, Procedures, and Drawings" of very low safety significance (Green) for Dominion's failure to adequately specify post maintenance test (PMT) requirements for the control room ventilation exhaust fan 1B (3HVC*FN1B) following replacement of the breaker starter on June 19, 2012. Specifically, Dominion did not provide sufficient direction to the operations staff in the control room regarding the correct retest procedure or acceptance criteria to complete an adequate PMT. As a result, 3HVC*FN1B was retested and returned to an operable status despite the inability of this fan to respond to a control building isolation (CBI) actuation signal. Subsequently, on June 21, 2012, train 'B' HVC was declared inoperable after the HVC system failed routine surveillance test SP 3614F.1 002, "Control Room Emergency Filtration System Operability Test." Dominion identified that the auxiliary contacts for the 42x relay had not been correctly installed in the breaker for 3HVC*FN1B, which would have prevented the automatic starting of the fan during a CBI signal. The PMT acceptance criteria, specified in design change MP3 11-01065 and translated into work order 53102451547 had been met but were not adequate to retest the breaker.

Dominion entered this issue into their corrective action program (CAP) as condition report (CR) 492783. The finding is more than minor because it affected the design control attribute of the control room ventilation boundary barrier for the barrier integrity cornerstone. The performance deficiency was similar to example 5.b in Appendix E of Manual Chapter 0612, "Examples of Minor Issues." In accordance with IMC 0609, "Significant Determination Process," the inspectors performed a Phase 1 analysis and determined that the finding was of very low significance because the finding represented a degradation of the control room radiological barrier function but not degradation against smoke or toxic gas. This finding involved the cross-cutting area of human performance, the component of the resources, and the aspect of complete documentation because the failure to properly retest the breaker following the installation of a design change was caused by inadequate procedural direction and acceptance criteria. [H.2(c)] (Section 1R19)

Inspection Report# : [2012004](#) (pdf)

Significance:  Aug 03, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

NCV 05000423/2012010-01 Failure to Take Timely Corrective Actions to Restore Degraded Unit 3 Main Feedwater Isolation Valves

Green. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criteria XVI, "Corrective Action," for Dominion's failure to take timely corrective actions for conditions adverse to quality involving the degradation of the closing capability of four Unit 3 main feedwater isolation valves. Dominion has deferred correcting this condition adverse to quality for over a period of six years (three refueling outages), and correction of the degraded condition is currently scheduled for the next refueling outage (April 2013).

The inspectors determined this issue was more than minor because it is similar to the more than minor examples, 4.f and 4.g of NRC IMC 0612, Appendix E, "Examples of Minor Issues." Additionally, the finding is more than minor because it is associated with the Design Control attribute of the Barrier Integrity cornerstone, and adversely affected the cornerstone's objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors determined the finding was of very low safety significance (Green) because the issue did not represent an actual open pathway in the physical integrity of the reactor containment. The inspectors determined this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Dominion

did not use conservative assumptions in decision making when delaying the repairs [H.1(b)].

Inspection Report# : [2012010](#) (*pdf*)

Emergency Preparedness

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

Significance:  Aug 03, 2012

Identified By: NRC

Item Type: FIN Finding

FIN 05000336&423/2012010-03 Failure to Perform Effectiveness Reviews for Formal Self-Assessments

Green. The inspectors identified a finding (FIN) of very low safety significance (Green) for Dominion's failure to perform procedurally required effectiveness reviews for numerous formal self-assessments. Consequently, Dominion missed opportunities to identify potential corrective actions for resolution in the corrective action program. Dominion has entered the issue into the corrective action program (CR482135).

The inspectors determined that this finding was more than minor because it is similar to IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," example 3.j; in that, it represents a programmatic deficiency that could lead to worse errors if uncorrected. This finding was of very low safety significance (Green) because the finding does not represent a loss of system and/or function, does not represent an actual loss of function of at least a single train for greater than its technical specification allowed outage time or two separate safety systems out-of-service for greater than its technical specification allowed outage time, and does 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 the licensee's Maintenance Rule program for greater than 24 hrs. This finding is not associated with an NRC Reactor Oversight Process cornerstone. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work Practices component, because Dominion personnel failed to follow procedures. [H.4(b)].

Inspection Report# : [2012010](#) (*pdf*)

Significance: N/A Aug 03, 2012

Identified By: NRC

Item Type: FIN Finding

FIN 05000336&423/2012010-04 Millstone 2012 Biennial PI&R Inspection Summary

The inspectors concluded that Dominion was generally effective in identifying, evaluating, and resolving problems. In most cases, Dominion personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. Dominion appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that Dominion typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner. However, the inspectors identified two violations of NRC requirements in the areas of Prioritization and Evaluation of Issues, and Effectiveness of Corrective Actions.

The inspectors concluded that Dominion adequately identified, reviewed, and applied relevant industry operating experience to Millstone Power Station operations. In addition, based on those items selected for review, the inspectors determined that in general, Dominion's self-assessments and audits were thorough. However, the inspectors identified one finding in the area of Self-Assessments and Audits that was determined not to be a violation of NRC requirements.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues, nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.

Inspection Report# : [2012010](#) (*pdf*)

Last modified : February 28, 2013