Millstone 2
4Q/2014 Plant Inspection Findings

Initiating Events

Significance: N/A Aug 01, 2014
Identified By: NRC
Item Type: AV Apparent Violation
Failure to Complete a 10 CFR 50.59 Evaluation for Removal of SLOD
The NRC identified a Severity Level III AV of Title 10 of the Code of Federal Regulations (10 CFR) 50.59, "Changes, Tests, and Experiments," for Dominion's failure to complete a 10 CFR 50.59 evaluation and obtain a license amendment for a change made to the facility as described in the Updated Final Safety Analysis Report (UFSAR). Specifically, Dominion removed a special protection system (SPS), known as severe line outage detection (SLOD), which was described in the UFSAR. Dominion concluded in the 10 CFR 50.59 screening that a full 10 CFR 50.59 evaluation was not required and, therefore, prior NRC approval was not needed to implement this change. The team concluded that prior NRC approval likely was required because the removal of SLOD may have resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of the offsite power system as described in the UFSAR. Dominion has documented condition reports CR 553967 and CR 551068, and participated in a root cause evaluation with Northeast Utilities to determine whether the relay operations that initiated the events of May 25, 2014, were appropriate for the circumstances. Dominion also implemented a compensatory measure by issuing an Operations Standing Order for interim guidance on offsite line outages and plant generation output.
The team determined that the failure of Dominion to complete a 10 CFR 50.59 evaluation of the modification for the removal of the SLOD system involved traditional enforcement because it impacted the NRC's ability to perform its regulatory function. This AV was determined to be more than minor because the team determined that the change to the facility required a full 10 CFR 50.59 evaluation and it likely would have required Commission review and approval prior to implementation. The severity level of this AV was determined, in part, using SDP risk significance in accordance with the NRC Enforcement Policy. A Region I Senior Risk Analyst conducted a conditional core damage probability estimate and determined that it was most properly characterized at a Severity Level III. Cross-cutting aspects are not assigned to traditional enforcement violations
Inspection Report# : 2014011 *(pdf)*

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)*

Significance: G May 10, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
NCV 05000336/2014003-01, Failure to Maintain Adequate Procedure for RCS Drain/Fill
Green. The inspectors identified a Green NCV of TS 6.8.1, Procedures, for Dominion's failure to maintain an adequate procedure for reactor filling and draining that incorporates guidance contained in NRC Generic Letter 88-17. Specifically, OP2301E, draining the RCS, permitted operation in a reduced RCS inventory condition without ensuring redundant means of level indication contrary to the inventory control requirements of OU-M2-201, Shutdown Safety Assessment Checklist.

The failure to maintain an adequate procedure for operating in reduced inventory conditions is a performance deficiency. The inspectors determined this performance deficiency is more than minor because it would affect the Initiating Event cornerstone attribute of equipment performance and affects the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Specifically, inadequate procedural guidance increased the likelihood that operators could experience a loss of level indication during the reduced inventory condition. The inspectors evaluated the significance of the finding using IMC 0609 Appendix G, "Shutdown Operations Significance Determination Process", Attachment 1 "Shutdown Operations Significance Determination Process Phase 1 Initial Screening and Characterization of Findings" and the issue screened to a Phase 2 analysis. Using the guidance contained in IMC 0609 Appendix G Attachment 2, "Phase 2 Significance Determination Process Template for PWR During Shutdown," the inspectors worked with regional and headquarters senior reactor analysts to determine the issue screened to Green.

The inspectors determined this issue had a cross cutting aspect in the area of Human Performance, Avoid Complacency, where individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, the latent error of considering L-112 and LI-112 as independent level instruments even though a single failure impacted both instruments contributed to the issue. (H.12) (Section 1R20

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

Barrier Integrity

Emergency Preparedness

Significance: G Jun 30, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
.NCV 05000336/2014003-03 and 05000423/2014003-03, Failure to Adequately Maintain EALs
Green. The inspectors identified a Green NCV associated with emergency preparedness 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 the Millstone Units 2 and 3 emergency action level (EAL) schemes for assessing a loss of forced flow cooling during refueling operations. Dominion entered this issue into the corrective action program and implemented temporary corrective actions which included procedure changes to direct operators to the shutdown safety assessment checklists to determine representative RCS temperature increases in order to assess the initiating conditions for this situation.

The inspectors determined that the failure by Dominion to provide site specific criteria for operators to adequately implement the EALs for a loss of forced flow cooling during refueling was a performance deficiency that was reasonably within their ability to foresee and prevent. The finding is more than minor because it is associated with the Procedure Quality attribute of the Emergency Planning Cornerstone and affected the cornerstone objective to ensure that Dominion is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the IMC 0609, Appendix B, “Emergency Preparedness Significance Determination,” the inspectors determined that this finding is of very low safety significance because the performance deficiency was an issue where two EAL initiating conditions (ICs) had been rendered ineffective such that an Unusual Event and an Alert would not be declared, or declared in a degraded manner for a loss of forced flow cooling during refueling. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Identification, in that Dominion did not implement a CAP with a low threshold for identifying issues. Dominion’s self-assessment for two previous NCVs regarding EAL deficiencies failed to identify the lack of specific criteria to assess the ICs for EALs UE1.2 and EA2.1 for a loss of forced cooling flow during refueling [P.1]. (Section 4OA5)

Inspection Report# : 2014003 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Maintain Radiation Exposure ALARA During Refueling Outage 2R22 Activities
A self-revealing finding (FIN) of very low safety significance (Green) was identified due to the accrual of excessive unintended occupational collective radiation exposure during Millstone refueling outage 2R22. This resulted from performance deficiencies in planning and work control while performing scaffolding work, valve maintenance, and a valve replacement during the Unit 2 refueling outage. No violation of NRC requirements was identified.

The unintended collective radiation exposures were due to work planning and work control deficiencies that were reasonably within Dominion’s ability to control and prevent. The finding was more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective to ensure the adequate protection of the worker from radiation exposure. The performance deficiency is similar to examples in Appendix E of IMC 0612; in that the actual collective dose exceeded

5 person-rem and exceeded the planned, intended dose by more than 50 percent. The finding has a cross-cutting aspect in the area of Human Performance, Work Management, in that the Millstone organization did not implement a process of planning, controlling, and executing work activities such that station-established radiation exposure goals could be met. [H.5]

Inspection Report# : 2014005 *(pdf)*

Significance: G Apr 20, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
NCV 05000336/2014003-02, Failure to Utilize Respiratory Protection as Specified in Work Control Documents
Green. The inspectors identified a self-revealing Green NCV of Technical Specification (TS) 6.81, Regulatory Guide 1.33, Appendix 'A', Radiation Work Permits (RWP) and as low as reasonably achievable (ALARA) procedures, for Dominion's failure to utilize respiratory protection, as required by the applicable RWP and associated ALARA evaluation for work on replacement of valve 2-SI-227 on April 20, 2014. This failure resulted in an unplanned intake of radioactive material for one worker. Dominion subsequently enforced the respiratory protection requirements to complete the work, and entered this issue into their corrective action program (CAP) (CR546439).

Failure to use respiratory protection during machining work as required by Dominion procedure was a performance deficiency that was reasonably within Dominion's ability to foresee and correct. The inspectors determined that the performance deficiency was more than minor because it affected the Radiation Safety – Occupational Radiation Safety Cornerstone attribute of Program and Process associated with exposure/contamination controls, because it resulted in the unintended internal exposure of a worker. A cross-cutting aspect of "Conservative Bias" (H.14) in the "Human Performance" cross-cutting area was associated with the Finding. Specifically, radiation protection staff did not adhere to the RWP requirements. (Section 2RS3)

Inspection Report# : 2014003 *(pdf)*

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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