Millstone 2
2Q/2006 Plant Inspection Findings

Initiating Events

Significance: G Mar 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM EVALUATIONS ON BORIC ACID LEAKS
The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" for Dominion's failure to follow Boric Acid Corrosion Control Program (BACCP) procedures. Specifically, plant personal routinely failed to perform boric acid leak evaluations as required per Dominion procedure DNAP-1004, "Boric Acid Corrosion Control Program," despite the specified threshold having been met. This finding is more than minor because it is associated with the Initiating Events Cornerstone attribute of human performance and it affects the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The licensee entered this condition into the corrective action program as CR-06-02088. This finding was characterized as a loss-of-coolant-accident (LOCA) initiator and was determined to be of very low safety significance (Green) because it did not result in exceeding the Technical Specification limit for identified reactor coolant system (RCS) leakage or affect other mitigation systems resulting in a total loss of their safety function. Corrective actions included a planned revision to the Boric Acid Corrosion Control program to ensure evaluations are performed and documented. In addition, the licensee conducted a Boric Acid Corrosion Control program peer review using another nuclear power station boric acid program owner. This finding is related to the cross-cutting area of human performance in that on at least 22 occasions, station personnel did not follow established station procedures requiring boric acid evaluation.
Inspection Report# : 2006006*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: FIN Finding
DID NOT IDENTIFY OR EVALUATE AIR VOIDS LOCATED IN AUXILIARY FEEDWATER SYSTEM
The inspectors identified a finding when Dominion did not recognize that a portion of the auxiliary feedwater (AFW) discharge header contained air voids after they determined that AFW flow instrumentation was behaving erratically as a result of air in the instrument line. Specifically, Dominion initiated a condition report after identifying that AFW flow instrumentation was air bound but closed out operability concerns based on air only affecting instrumentation and not the potential that air could exist in the discharge portion of the system. As a result, Dominion did not identify existing voids in AFW discharge piping or assess these air voids for impact on AFW operability. Dominion entered this condition into their corrective action program as CR-06-04677. Corrective actions for this issue included conducting ultrasonic testing of the discharge piping, quantifying the air voids in the system, and evaluating operability of the system with these air voids left in place. This finding is more than minor because it is associated with the Mitigating Systems Cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, Dominion did not investigate or evaluate the existence of air voids in the AFW system discharge piping when air was identified in the system. This finding was determined to be of very low safety significance (Green) because it did not result in a loss of function once the existing air voids were identified and evaluated. This finding is related to the cross-cutting aspect of problem identification and resolution in that Dominion did not fully investigate the existence of air voids in other parts of the AFW system and as a result did not fully evaluate the impact of existing air voids in the AFW system discharge piping.
Inspection Report# : 2006003*(pdf)*

Significance: G Mar 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO COMPLY WITH TS DURING WRNI SURVEILLANCES
The inspectors identified a Green NCV for the failure to comply with TS 3.3.1.1, “Reactor Protection Instrumentation,” during routine monthly surveillance testing of the Wide Range Nuclear Instrument (WRNIs). During a review of control room logs from January 1, 2006 through March 31, 2006, the inspectors identified that Operations did not enter TS 3.3.1.1 on two occasions during WRNIs testing and take action per Table 3.3-1 to place the Reactor Coolant Flow-Low and Thermal Margin/Low Pressure protective channels in either the bypassed or tripped condition within 1 hour. Dominion took immediate action to inform the operators of this deficiency and entered this issue into their corrective action program under CR-06-02295 and CR-06-03586 for resolution. The failure by the operators to comply with TS was more than minor because it affected the configuration control attribute of the Mitigating Systems Cornerstone. Specifically, deliberate operator action was required to ensure that proper reactor protection system coincidence was maintained. Because there was no loss of safety function and the zero power mode switch was later

verified to be in the “OFF” position, the failure to meet the TS action statement was considered to be of very low safety significance (Green). This finding is related to the cross-cutting aspects of problem identification and resolution in that Dominion did not identify the requirement to enter TS 3.3.1.1 for WRNIs during testing and failures and take action to place the Reactor Coolant Flow-Low and Thermal Margin/Low Pressure protective channel in either the bypassed or tripped condition within 1 hour.
Inspection Report# : 2006002*(pdf)*

Significance: G Mar 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE SUITABILITY OF APPLICATIONS EVALUATION FOR DAMPENER MODIFICATION
The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" associated with the Unit 2 charging system pump discharge dampener modification. Specifically, the licensee's review of the design modification failed to adequately consider the suitability of the dampener in that a potential common mode failure mechanism associated with gas binding of the charging pump suction was not considered nor evaluated. This condition was entered into the licensee's corrective action program as CR-06-02382. Corrective actions include performing a root cause to, in part, determine why the design process and other organizational factors that installed the bladders did not identifiy the potential common mode failure. The finding was more than minor because it affected the availability, reliability, and capability objective of the Mitigating System Cornerstone and its associated design control attribute. Specifically, inadequate design control caused Dominion to not fully consider the affects of a discharge dampener bladder failure on the common suction of the Unit 2 charging pumps, a condition which, on January 9, 2006, led to the momentary loss of the charging system. Based upon the IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening worksheets, this finding required a Phase 2 evaluation since the finding represented a loss of system safety function. Based upon the Phase 2 results, the Region 1 Senior Reactor Analyst (SRA) conducted a Phase 3 evaluation. The cumulative increase in core damage probability for this condition was determined to be in the low E-8 range and of very low safety significance (Green). This finding has a problem identification and resolution cross-cutting aspect in that evaluations and corrective actions performed by the licensee were inadequate to prevent charging system anomalies despite the identification of a small boric acid leak from the cap of the "B" charging pump discharge pulsation dampener, an indication of a failed pulsation dampener for which no corrective maintenance was performed.
Inspection Report# : 2006006*(pdf)*

Significance: G Oct 15, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO TAKE TS ACTION WITH THE "B" EDG INOPERABLE
The inspectors identified a non-cited violation of Technical Specification (TS) 3.8.1.1, "AC Sources," since Dominion did not perform the required TS action (TS 3.8.1.1.b.3) after they discovered the "B" emergency diesel generator (EDG) was inoperable on May 18, 2005. Specifically, Dominion failed to verify that the steam-driven auxiliary feedwater pump was operable after declaring the "B" EDG inoperable. In addition, Dominion did not identify in the Licensee Event Report (LER) documenting this occurrence that TS 3.0.5, "Limiting Conditions for Operation," was also not entered during the time that the "B" EDG was inoperable. Dominion has entered this condition into their corrective action program (CR-05-11468) and updated the LER to reflect TS 3.0.5 applicability. This finding was more than minor because it affected the human performance attribute and the availability, reliability, and capability objective of the Mitigating System cornerstone. Specifically, Dominion did not verify the steam-driven auxiliary feedwater pump was operable upon the discovery that the "B" EDG was inoperable. This finding was determined to be of very low safety significance (Green) since the steam-driven auxiliary feedwater pump was subsequently determined to have been available to perform its function. This finding is related to the cross-cutting area of Human Performance in that operations personnel did not perform the required actions of TS 3.8.1.1.b.3 after they declared the "B" EDG inoperable on May 18, 2005.
Inspection Report# : 2005004*(pdf)*

Significance: G Oct 15, 2005
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY IMPLEMENT OPERABILITY DETERMINATION PROCEDURE ON THREE OCCASIONS
The inspectors identified a finding where Dominion did not adequately implement their Operability Determination (OD) procedure on three occasions which affected the basis for operability for degraded conditions identified on safety-related systems. Dominion has initiated corrective actions to conduct an assessment of their current operability determination process, evaluate the assessment results, and implement corrective actions to improve their process. Specifically;
•Dominion did not perform a prompt operability determination for approximately 8 days to evaluate whether a fence installed over the Unit 2 turbine-driven auxiliary feedwater pump (TDAFWP) cubicle high energy line break blowout panel adversely impacted the panel's ability to perform its design function. After investigation, Dominion determined that a supporting engineering evaluation did not exist, declared all three auxiliary feedwater pumps inoperable, and took prompt action to reroute the fencing around the blowout panel.
•Dominion did not revise an operability determination on the Unit 2 charging system when new information discovered during system troubleshooting showed that the basis for the operability determination was in question. Dominion ultimately decided to close the operability determination to previous troubleshooting and maintenance activities associated with the degraded condition.
Dominion described as the basis for operability in a condition report (CR) that a technical evaluation existed that showed that a Unit 3 high pressure safety injection (SIH) pump could meet its mission time with an oil leak of up to six drops per minute. The referenced technical evaluation however, did not discuss mission time, but calculated the time to deplete a high pressure safety injection pump oil reservoir in the presence of a four drop per minute and six drop per minute leak.
This finding was more than minor because it affected the equipment performance attribute and the availability, reliability, and capability objective

of the Mitigating System cornerstone. Specifically, Dominion did not adequately evaluate the availability of Mitigating Systems with degraded conditions to ensure their availability to perform the intended safety function. This finding was determined to be of very low safety significance (Green) since there was not a loss of function for the TDAFW and charging system examples and since the SIH pump would have completed its safety function within the Probabilistic Risk Assessment 24 hour evaluation time. This finding is related to the cross-cutting area of Problem Identification and Resolution (PI&R) because of the failure to conduct timely and adequate evaluations of degraded and non-conforming conditions.
Inspection Report# : 2005004*(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: FIN Finding
INEFFECTIVE CORRECTIVE ACTIONS TO PREVENT SERO QUALIFICATION LAPSES
The inspector identified a Green finding for the failure to take effective corrective actions in that since 2004, on several occasions, staff assigned to the site emergency response organization (SERO) did not maintain their qualifications current. The corrective actions taken to prevent recurrence of this problem were not effective as highlighted by repeat examples of lapsed SERO qualifications. Individuals identified during the inspection with the lapsed qualifications were immediately removed from the SERO callout system until their training was completed. The cause of the finding is related to the cross-cutting element of problem identification and resolution in that the corrective actions taken were not effective in preventing reoccurrence. The finding is more than minor because it is associated with the EP cornerstone attribute of emergency response organization readiness (training). It affects the cornerstone objective of ensuring the capability to implement measures to protect the health and safety of the public during an emergency. Specifically, Dominion's corrective actions to ensure personnel maintained their SERO qualifications current were ineffective and did not prevent recurrence. This finding is not suitable for SDP evaluation, but has been reviewed by NRC management and is determined to be a finding of very low safety significance.
Inspection Report# : 2005005*(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Mar 03, 2006
Identified By: NRC
Item Type: FIN Finding
PROBLEM IDENTIFICATION AND RESOLUTION TEAM INSPECTION RESULTS
The inspectors identified that the licensee was effective at identifying problems and entering them into the corrective action program (CAP). The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies were identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were generally implemented in a timely manner. Licensee audits and self-assessments were found to be generally effective. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety concerns and issues into

the CAP program. However, the inspectors did identify some missed opportunities to identify issues and enter them into their corrective action program. In addition, there were some instances where issue evaluations and corrective actions were not effective in resolving problems.
Inspection Report# : 2006006*(pdf)*

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