

Summer 4Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain two required reactor coolant system leak detection systems operable and complete the required TS actions

Green. A Green non-cited violation (NCV) of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.4.6.1, "Leak Detection Systems", was identified by the inspectors for failure to maintain two required reactor coolant system (RCS) leak detection systems operable and complete the required TS actions. Specifically, the Reactor Building Cooling Unit (RBCU) condensate drain flow detector (IFS01900A) was discovered to be inoperable for a significant period of time due to debris clogging the flow detector flow path. During the last three years prior to October 4, 2007, this condition was coincident with multiple time periods when the reactor building atmosphere gaseous and particulate radioactivity monitors were also inoperable for greater than six hours. The licensee immediately cleaned the condensate flow detector piping, calibrated the detector, restored compliance with TS, and documented this issue in their corrective action program as CR-07-02167 and CR-07-03332.

This finding was more than minor because it affected the availability, reliability, and maintenance of the barrier integrity equipment performance attribute of the initiating events cornerstone and adversely 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. With the RBCU condensate flow detector inoperable coincident with reactor building atmosphere gaseous and particulate radioactivity monitors, the capability of performing the TS, design bases function was lost for a significant period of time. The finding was evaluated using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Phase I Worksheet for initiating events. The finding is determined to be of very low safety significance because at least one method of RCS leak detection (reactor building sump level) was available to the licensee and no actual leakage above one gpm (the TS required limit for RCS unidentified leakage) was indicated through the RCS water balance surveillance test during the reviewed time period. The finding directly involves the cross-cutting area of Human Performance under the "Complete Documentation and Component Labeling" aspect of the "Resources" component, in that, the condensate flow detector TS surveillance procedure failed to test the capability of the system to perform its specified function to include support and auxiliary equipment (H.2.c).

Inspection Report# : [2007005](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Implementation of Dedicated Manual Operator Risk Management Actions During EDG Surveillance Testing

A Green non-cited violation (NCV) of 10 CFR 50.65(a)(4) was identified by the inspectors for the licensee's failure to manage the increase in plant risk during the conduct of "A" emergency diesel generator (EDG) routine surveillance testing. Specifically, the licensee failed to adequately implement the dedicated manual operator risk management compensatory actions for promptly restoring the EDG in the event of an emergency start demand. This resulted in the unplanned and unnecessary unavailability of the EDG during portions of the surveillance activity that relied on these dedicated manual operator actions. The licensee documented this issue in their corrective action program and conducted operator coaching on performing thorough pre-job briefings and the responsibilities of dedicated operators

performing risk management actions.

This finding was more than minor because it was associated with the Equipment 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 is of very low safety significance because the Risk Deficit for the finding was calculated (using Appendix K of Inspection Manual Chapter 0609, "Maintenance Risk Assessment and Risk Significance Determination Process") to have been significantly less than 1×10^{-6} . The cause of the finding directly involved the "Supervisory and Management Oversight" aspect of the "Work Practices" component of the cross-cutting area of Human Performance, in that, operator supervisory personnel failed to provide the appropriate level of supervisory oversight, especially during the activity pre-job brief, to ensure the proper implementation of dedicated manual operator risk management actions (H.4 (c)).

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Corrective Actions Results in Repetitive Spurious Tripping of EDG Room Ventilation Fan Molded Case Circuit Breakers

A Green self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for inadequate corrective actions which resulted in repetition of a significant condition adverse to quality involving the spurious tripping of safety-related molded case circuit breaker associated with the "A" emergency diesel generator (EDG) room ventilation cooling fan "A" due to asymmetrical in-rush starting current. The licensee documented this failure in their corrective action program and implemented breaker trip setpoint changes to preclude spurious tripping from this phenomenon.

This finding is more than minor because it affected 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 finding is of very low safety significance because it did not result in a loss of safety function of one or more trains of the EDGs and was not potentially risk-significant due to possible external events. The cause of this finding involved the thorough evaluation of identified problems aspect of the Problem Identification and Resolution cross-cutting area, in that, the extent of condition evaluation for the previous spurious trip of the "A" EDG room cooling fan "B" failed to consider the need to readjust the trip setpoint of "A" EDG room ventilation cooling fan "A" in order to mitigate the possibility of spurious tripping (IMC 305 P.1(c)).

Inspection Report# : [2007002](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement TS required administrative controls when opening containment isolation valves 8767-DN and 8768-DN

Green. A Green non-cited violation (NCV) of Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.6.4, "Containment Isolation Valves", was identified by the inspectors for the failure to implement required administrative controls when opening the normally locked closed inner and outer manual containment isolation valves (CIVs) 8767-DN and 8768-DN, in containment penetration XRP0231. The licensee drained the penetration, returned the valves to their locked closed positions, and documented this violation in their corrective action program as CR-07-02894.

The failure to implement TS required administrative controls when opening normally locked closed CIVs 8767-DN and 8768-DN constituted a performance deficiency and a finding. This finding is more than minor because it affected

the containment boundary configuration control attribute of the barrier integrity cornerstone and affected the cornerstone objective of providing reasonable assurance that the containment physical design barrier protects the public from radionuclide releases caused by accidents or events. The finding was evaluated using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix H, "Containment Integrity Significance Determination Process." This finding is of very low safety significance (Green) because of the short duration both valves were open and the small size of the piping (one-inch) penetrating containment. The finding directly involves the cross-cutting area of Human Performance under the "Work Planning" aspect of the "Work Control" component, in that, appropriate work plans were not implemented to ensure that operators were stationed locally to close both valves in the event of a design bases accident resulting in a violation of TS 3.6.4 (H.3.a).

Inspection Report# : [2007005](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Shutdown of Required Containment Radiation Monitor During Reactor Building Purge System Operation Results in Violation of TS 3.3.2

A Green self-revealing non-cited violation of Technical Specification 3.3.2 was identified for failure to maintain two containment radiation monitors operable and capable of automatically isolating reactor building purging operations in the event of high containment radioactivity during a design basis accident. The licensee documented this violation in their corrective action program and implemented procedural enhancements and control board tagging controls to alert operators when containment purging operations were in service.

This finding is more than minor because it affected the configuration control attribute of the Barrier Integrity cornerstone and affected the cornerstone objective of providing reasonable assurance that the containment physical design barrier protect the public from radionuclide releases caused by accidents or events. The finding is of very low safety significance because there was no loss of safety function since radiation monitor RM-A4 was still operable during this period to provide isolation of the inside containment purge supply and exhaust containment isolation valves and because of the short time the RM-A2 train was inoperable. The cause of this finding is related to the human performance and error prevention aspect of the cross-cutting area of human performance due to inadequacies in the pre-job briefing that failed to recognize the adverse interaction posed by conducting the surveillance test with the reactor building alternate purge system in service (IMC H.4(a)).

Inspection Report# : [2007002](#) (*pdf*)

Emergency Preparedness

Significance: SL-III May 14, 2007

Identified By: NRC

Item Type: VIO Violation

EAL Changes Resulted in Decreases in Effectiveness and a Non-Standard EAL Scheme

The NRC identified [a Severity Level III] violation (SL-III) related to the licensee's implementation of EAL changes which decreased the effectiveness of the Emergency Plan, and related to the licensee's failure to maintain a standard emergency classification scheme. The violation is associated with 10 CFR 50.54(q), emergency preparedness planning standard 10 CFR 50.47(b)(4), and the requirements of Section IV.B of 10 CFR 50, Appendix E.

The licensee's implementation of EAL changes that resulted in a decrease in effectiveness of the Emergency Plan and a failure to maintain a standard emergency classification scheme are performance deficiencies. This finding is greater than minor because it is associated with the Emergency Preparedness Cornerstone and affects 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 finding is an identified weakness that demonstrates a level of performance that could preclude effective implementation of the Emergency Plan in an actual emergency. This finding is also determined to potentially have greater significance because the finding represents a failure to meet planning standard 10 CFR 50.47(b)(4) and the requirements of Section IV.B of 10 CFR 50, Appendix E to obtain NRC approval prior to implementation of a revision to an EAL that changes EAL schemes, uses alternate methods for complying with the regulations or decreases the effectiveness of the emergency plan.

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

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