

Summer 2Q/2006 Plant Inspection Findings

Initiating Events

G**Significance:** Mar 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Use Adequate Maintenance Procedures to Inspect and Repair Main Steam Isolation Valves

A self-revealing, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for failure to establish, implement, and maintain adequate maintenance procedures to ensure that the Main Steam Isolation Valves (MSIVs) were capable of performing their safety-related function. Specifically, maintenance procedure MMP-300.023, Main Steam Isolation Valve Air Actuator Maintenance, was inadequate in that it did not include hot-condition checks of the alignment of the bottom spring plate and stanchion gap tolerances.

This finding is greater than minor because it impacts the equipment performance attribute of the Reactor Safety Mitigating Systems Cornerstone in that the failure of the MSIV to close affects the reliability and availability of that valve. This finding was determined to be of very low safety significance because the valve did go closed within a relatively short time, and because the effects of the failure of a single MSIV to close are bounded by accident analysis assumptions.

Inspection Report# : [2006007\(pdf\)](#)

Mitigating Systems

G**Significance:** Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Adequate and Timely Corrective Actions to Preclude Repetitive Spurious Tripping of Safety Related Molded Case Circuit Breakers

The inspectors identified a non-cited violation of 10 CFR 50 Appendix B Criterion XVI was identified for the licensee's failure to take adequate and timely corrective actions to preclude repetition of a significant condition adverse to quality. Specifically, the licensee failed to prevent the spurious tripping of safety-related molded case circuit breakers for the Emergency Diesel Generator (EDG) room ventilation supply fans due to asymmetrical in-rush current. The licensee has entered this issue in its corrective action program for resolution.

This finding is more than minor because it is associated with the Mitigating Systems Cornerstone attribute of equipment performance and adversely affected the cornerstone objective of ensuring the availability, reliability and capability of the EDGs. The finding is of very low safety significance because it did not result in a loss of safety function of one or more EDG trains and was not potentially risk-significant due to possible external events. The direct cause of this finding involved the cross-cutting area of Problem Identification and Resolution, in that, the identified corrective actions were not adequate to resolve the fans tripping due to asymmetrical in-rush current.

Inspection Report# : [2006003\(pdf\)](#)G**Significance:** Jun 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify the SBLOCA Most Limiting Condition for Verification of RHR MOV Operability

The team identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee's corrective action to address an industry operating experience issue applicable to their station was inadequate in that the evaluation did not correctly identify the most limiting condition of a small break loss of coolant accident (SBLOCA) on their ability to open the residual heat removal (RHR) system containment suction motor operated valves (MOV) which was the subject of a previous industry operating experience report from the McGuire Nuclear Station in 2005. The licensee entered the deficiency into their corrective action program for resolution.

This finding is more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance (Green) because subsequent analysis demonstrated that the valves remained capable of performing their design function. This finding involved the cross-cutting area of Problem Identification and Resolution because the problem evaluation did not correctly identify the most limiting condition for operation of the RHR containment suction MOVs following a SBLOCA scenario.

Inspection Report# : [2006008\(pdf\)](#)

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Significance: Jun 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Deficient Extent of Condition Review for EDG B Lube Oil TCV Malfunction

The team identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee's corrective action to evaluate an extent of condition on emergency diesel generator (EDG) A following identification of an EDG B lube oil thermostatic control valve (TCV) malfunction was deficient. The extent of condition review to assess the potential for a similar component malfunction on EDG A was technically inadequate, incomplete, and did not provide assurance that the EDG A remained operable for all possible operating conditions, particularly increased heat sink conditions occurring in the summer. The licensee entered the deficiency into their corrective action program for resolution.

The finding is more than minor because it affected the equipment performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance because the licensee determined that the EDGs were operable based on heat sink temperatures and that TCV performance monitoring would be accomplished when heat sink temperatures are expected to increase. This finding involved the cross-cutting area of Problem Identification and Resolution because the evaluation, specifically the extent of condition review, was inadequate in that it failed to assure that the EDG B component malfunction did not apply to EDG A.

Inspection Report# : [2006008\(pdf\)](#)

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Significance: Jun 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Acceptance Criteria for EDG Intercooler Performance Testing

The team identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion III, Design Control. Specifically, the licensee used non-conservative acceptance criteria for the emergency diesel generator (EDG) intercooler performance test, PTP-213.002, Service Water System Heat Exchanger Data Collection. The acceptance criteria for the allowed heat exchanger fouling factor based on tubes plugged was non-conservative and could allow heat exchanger degradation below design limits. Additionally, the wall thickness criteria for tube pitting would allow full penetration to occur between tube inspections. Loss of tube integrity would degrade the ability of the heat exchanger to remove the design heat load of the EDG. The licensee entered the deficiency into their corrective action program for resolution.

The finding is more than minor because it affected the procedure quality attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance because the licensee determined that EDGs were operable based on the affected heat exchanger having been recently cleaned; the latest intercooler performance results indicated substantial heat exchanger duty margin; and the proposed monthly trending of the heat exchanger.

Inspection Report# : [2006008\(pdf\)](#)

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Significance: Aug 26, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Prevent Spurious Operation of Charging Pump Suction From Volume Control Tank Valves LCV-115C and LCV-115E

A non-cited violation of V.C. Summer Facility Operating License No. NFP-12, Condition 2.C.(18) and 10 CFR 50, Appendix R, Section III.G.2, was identified for failure to protect the control circuits for level control valves (LCV) LCV-115C and LCV-115E, (charging pump suction valves from the Volume Control Tank), to prevent spurious operation during a severe fire.

The finding adversely impacted the reliability and capability of equipment required to achieve and maintain a safe shutdown condition following a severe fire. The finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. The finding degraded the defense-in-depth for fire protection. The safety significance of this finding was not more than very low because of the installed spare charging pump, redundancy in reactor coolant pump seal cooling, limited ignition sources, and current protection transformers.

Inspection Report# : [2005009\(pdf\)](#)

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Significance: Aug 26, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Fire Emergency Procedure Implementation Not Timely To Maintain Pressurizer Level In Indicating Range

A non-cited violation of V.C. Summer Facility Operating License No. NFP-12, Condition 2.C.(18) and 10 CFR 50, Appendix R, Sections III.G and III.L. was identified for failure to establish timely performance of key steps in the fire emergency procedures to ensure that pressurizer level would be maintained in the indicating range during plant fires that involved evacuation of the control room and use of alternative shutdown methods.

The finding adversely impacted the reliability and capability of equipment required to achieve and maintain a safe shutdown condition following a severe fire. The finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. The finding degraded the defense-in-depth for fire protection. The safety significance of this

finding was not more than very low because of the operator action timelines and thermo-dynamic analysis.

Inspection Report# : [2005009\(pdf\)](#)

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Significance: Aug 26, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Post-Fire Operator Actions For Reactor Coolant Pump Seal Cooling Were Not Adequate

A non-cited violation of V.C. Summer Technical Specification 6.8.1 regarding written procedures was identified for failure to ensure that vendor recommendations related to operation of reactor coolant pump seals would be followed during a severe fire.

The finding adversely impacted the reliability and capability of equipment required to achieve and maintain a safe shutdown condition following a severe fire. The finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. The finding degraded the defense-in-depth for fire protection. The safety significance of this finding was not more than very low because of the redundancy in reactor coolant pump seal cooling, limited amounts of ignition sources, and current protection transformers.

Inspection Report# : [2005009\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

W

Significance: Mar 03, 2006

Identified By: Self-Revealing

Item Type: VIO Violation

Failure to Properly Prepare a Radioactive Material Package for Shipment

The inspectors identified an apparent self-revealing finding of low to moderate safety significance. The licensee failed to prepare a shipment of radioactive material to a waste processing facility in a manner such that, under conditions normally incident to transportation, the radiation level at any point on the external surface of the package would not exceed 200 millirem per hour (mR/hr), as specified by the Department of Transportation (DOT) Regulation 49 CFR 173.441(a). When the shipment arrived at the processing facility on May 27, 2005, the radiation dose rates, measured on portions of the external surface of the package, were as high as 600 mR/hr, which is in excess of the limits specified by the regulatory requirement.

The failure to properly prepare the shipment in a manner to assure conformance with the requirements of 49 CFR 173.441(a) was determined to have low to moderate safety significance, using the Public Radiation Safety Significance Determination Process. The finding involved the transportation of radioactive material in which the external radiation that was accessible to members of the public exceeded DOT limits but was less than five times the regulatory limit.

In Inspection Report 05000395/2006-011, issued May 5, 2006, the final significance of this item was determined to be White. The apparent violation was closed to a violation, designated as 05000395/2006011-01. The violation is listed below.

10 CFR 71.5 requires that NRC licensees ship radioactive materials in accordance with the applicable provisions of the Department of Transportation regulations found in 49 CFR 100-177.

49 CFR 173.441(a) requires that each package of radioactive material offered for transport must be designed and prepared for shipment so that under conditions normally incident to transportation, the radiation level does not exceed 200 millirem per hour at any point on the external surface of the package.

Contrary to the above, the licensee failed to properly design and prepare for shipment a package of radioactive material that was transported from

the licensee's facility to an offsite waste processing vendor. Specifically, a package was shipped by V. C. Summer on May 26, 2005, and arrived at a waste processing vendor facility in Oak Ridge, Tennessee, on May 27, 2005, with contact radiation levels of 600 millirem per hour on the side external surface of the package approximately 10 feet from the ground.

Inspection Report# : [2006009\(pdf\)](#)

Inspection Report# : [2006011\(pdf\)](#)

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : August 25, 2006