

Catawba 1

4Q/2009 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Underground Fuel Oil Storage Tank Vent Tornado Missile Protection

A NRC-identified Green NCV of 10 CFR 50, Appendix B, Criterion III, was identified in that the installed emergency diesel generator (EDG) fuel oil storage tank vents did not meet the design basis of bending without crimping. The licensee completed corrective actions to install tornado missile protection to prevent crimping of the vents.

The licensee's failure to correctly translate the licensing basis into specifications for the vent piping was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone design control attribute and adversely impacted the cornerstone objective in that the vent piping could bend and completely crimp on impact of a tornado generated soft missile. A Phase 3 analysis was required because the finding involved the loss or degradation of equipment or function specifically designed to mitigate a severe weather initiating event. A qualitative assessment was performed to determine the risk significance because factors required for determining the risk were not easily quantifiable. Based on the qualitative assessment, the finding was determined to be of very low safety significance (Green). A cross-cutting aspect for this issue was not identified as it was determined to be a legacy design issue and not indicative of current licensee performance. (Section 40A5.3)

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Oct 15, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to monitor the turbine-driven auxiliary feedwater pump sump valves for units 1 and 2

The team identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee's failure to monitor the turbine-driven auxiliary feedwater pump (CAPT) sump valves for Units 1 and 2. PIPs C-09-05020 and C-09-04390 initiated immediate corrective actions, including testing of the subject valves during the inspection, wherein valve 1WL848 failed to stroke. Additionally, the licensee increased the maintenance category of the affected components and made procedural modifications to provide positive valve position controls.

The team determined that the licensee's failure to monitor the performance and condition of Valve 1WL848 was a performance deficiency. This finding is more than minor because it is associated with equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to perform periodic testing or preventative maintenance resulted in a lack of reasonable assurance that the valves would perform their function of protecting CAPT. The team determined that the finding is of very low safety significance (Green) using the SDP because the finding did not represent an actual loss of safety function. This finding was reviewed for cross-cutting aspects and none were identified since the performance deficiency was not indicative of current licensee performance. (Section 1R21.2.5)

Inspection Report# : [2009006](#) (*pdf*)

Significance:  Sep 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform required hourly fire watch patrols

The NRC identified a non-cited violation of 10 CFR 50.48 when a contract fire watch employee failed to complete fire watch surveillances on twelve occasions. The fire watch employee pre-signed the fire watch Impairment and Compensatory Measures (ICM) form then failed to perform the associated fire watch surveillance. The licensee entered the deficiency into the corrective action program for resolution.

This finding is more than minor because it is associated with the "Protection Against External Factors" attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of the systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding to be of very low safety significance (Green) because the missed fire watch surveillance reflected a low degradation of the Fire Prevention and Administrative Controls fire protection program element in that other area fire protection defense-in-depth features such as automatic fire detection (smoke detectors), automatic fire suppression capability (sprinklers), manual suppression capability (fire brigade), and safe shutdown capability from the main control room were still available. The finding directly involved the cross-cutting area of Human Performance under the "Supervisory and Management Oversight of Work" aspect [H.4(c)] of the "Work Practices" component. (Section 1RO5.1)

Inspection Report# : [2009007](#) (pdf)

Significance: SL-IV Sep 30, 2009

Identified By: NRC

Item Type: VIO Violation

Inaccurate fire watch records

The NRC identified a violation of 10 CFR 50.9(a) requirements when it was determined that multiple contract fire watch employees deliberately pre-signed fire watch ICM forms resulting in inaccurate fire watch records. Specifically, on seven occasions fire watch employees deliberately pre-signed the fire watch ICM forms and then another qualified employee performed the fire watch but failed to correct the inaccurate ICM form. The licensee entered the deficiency into the corrective action program for resolution.

This issue was dispositioned using traditional enforcement due to the willful aspects of the performance deficiency. Furthermore, the failure to provide complete and accurate information has the potential to impact the NRC's ability to perform its regulatory function. Although the investigation revealed that no fire watch surveillances were actually missed, this issue is considered more than minor due to the willful aspects of the performance deficiency. In accordance with the guidance in Supplement VII of the Enforcement Policy, this issue is considered a Severity Level IV violation because it involved information that the NRC required be kept by a licensee that was incomplete or inaccurate and of more than minor safety significance. No cross-cutting aspect was identified because this performance deficiency was dispositioned using traditional enforcement. (Section 1RO5.2)

Inspection Report# : [2009007](#) (pdf)

Significance:  Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to translate design requirements into a maintenance program to ensure Component Cooling Water system operability was maintained over the design life of the plant (Section 40A3.1)

•Green: A self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to translate the design basis for the Component Cooling Water (KC) heat exchanger Nuclear Service Water (RN) outlet control valve and the vendor's construction drawings into maintenance procedures to ensure the valve would remain operable over the design lifetime of the component. More specifically, the valve's actuator arm assembly was not scoped into the licensee's maintenance procedures for replacement, despite the fact that the vendor drawing identified the assembly as a consumable. As a result, an initially undetected failure of the assembly rendered the 1A train of KC inoperable for 72 hours, which included three periods of time (in excess of the unit shutdown requirements in Technical Specification (TS) Limiting Condition for Operation (LCO) 3.0.3) in which

the 1B train was also unavailable due to planned maintenance.

The finding was determined to be more than minor because it is associated with the Mitigating Systems cornerstone of "Design Control." It impacts the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events and prevent undesirable consequences. The failure to adequately maintain the valve actuator arm assembly resulted in a train of safety-related equipment being rendered inoperable, which was determined to be a safety system functional failure.

Using the IMC 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors concluded that a Phase 2 evaluation was required because the finding resulted in a loss of safety function. The inspectors performed a Phase 2 analysis using Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," of IMC 0609, "Significance Determination Process," and the Phase 2 Worksheets for Catawba Nuclear Station. The finding was determined to be of very low safety significance (Green) based upon the Phase 2 evaluation. This finding was reviewed for crosscutting aspects and none were identified. This issue has been entered into the licensee's Corrective Action Program as Problem Investigation Process (PIP) report C-09-0546. (Section 4OA3.1)

Inspection Report# : [2009002](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

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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