

Catawba 2

4Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to adequately implement tagout procedures

A self-revealing non-cited violation (NCV) of TS 5.4.1, Procedures, was identified when the licensee failed to follow NSD 500, Red Tags/Configuration Control Tags. The licensee implemented a tagout that was not supported by plant conditions which resulted in the inoperability of the 2B ND train while in Mode 6 with refueling cavity level less than 23 feet. Immediate actions were taken to declare the 2B ND train inoperable and manually reopen the loop isolation valves inside containment. The issue was entered into the licensee's corrective action program (CAP) as Problem Identification Program (PIP) report C-12-2313.

The performance deficiency (PD) was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and adversely affected the cornerstone objective in that the isolation of reactor coolant system pressure SSPS relays prevented the opening of the 2B ND loop isolation valves resulting in the 2B ND train being inoperable. Using the screening criteria in IMC 0609, Appendix G, Attachment 1, Phase 1 Operational Checklist 3, PWR Cold Shutdown and Refueling Operation RCS Open and Refueling Cavity <23 feet, a Phase 2 risk analysis was required because the finding increased the likelihood of a loss of decay heat removal. A Phase 3 risk analysis determined the finding was of very low safety significance (Green) because of the less than one hour exposure time. The cause of this finding was related to the cross-cutting aspect of the need to keep personnel apprised of the operational impact of work activities as described in the Work Control component of the Human Performance cross-cutting area because the effect of the tagout on ND system operation was not adequately understood by operations personnel responsible for implementation. [H.3(b)] (Section 1R20)

Inspection Report# : [2012003](#) (*pdf*)

Mitigating Systems

Significance: G Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate 3 hour fire barrier between essential switchgear rooms

An NRC-identified Green non-cited violation (NCV) of the Unit 1 and 2 Facility Operating Licenses, Condition 2.C.5, Fire Protection Program, was identified for failure to implement and maintain all provisions of the approved fire protection program. The inspectors identified gaps in the emergency switchgear room (ESR) hatch covers separating two fire areas containing redundant safe shutdown equipment which were not evaluated. The licensee placed the issue into the corrective action program and implemented fire watches and prohibited storage of transient combustibles in the area.

The inspectors determined the gaps in the ESR hatch covers was a performance deficiency (PD). The inspectors determined that the PD was more than minor because it was associated with the Mitigating System Cornerstone attribute of Protection against External Factors (fire) and adversely affected the cornerstone objective in that there was no reasonable assurance the gaps in the hatch covers would prevent fire propagation across the 3-hour fire rated barrier. The inspectors determined the finding was of very low safety significance (Green). The cause of this finding

was related to the cross cutting-aspect to thoroughly evaluate problems such that the resolutions address causes and extent of condition as described in the corrective action program component of the Problem Identification and Resolution cross-cutting area. [P.1(c)] (Section 1R05)

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain requalification examination integrity

An NRC-identified non-cited violation (NCV) of 10 CFR 55.49, Integrity of examinations and tests, was identified for the licensee's failure to adhere to examination procedure standards that allow no more than 50 percent scenario overlap between examinations. The licensee subsequently revised the 2012 annual operating examination to preclude the scenario overlap issue that would have occurred and entered the issue in their corrective action program as PIP C-12-06949 and PIP C-12-06950.

This performance deficiency was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective in that the failure to adhere to examination overlap standards adversely affected the quality of the administration of the operating exams. Using the Licensed Operator Requalification Significance Determination Process, this finding was determined to be of very low safety significance (Green) because no actual compromise of the examinations occurred. The cause of the finding was related to the cross-cutting aspect of procedures of the resources component of the cross-cutting area of Human Performance. [H.2(c)] (Section 1R11)

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 14, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Develop Adequate Test to Ensure Minimum SMP Flow Requirements

The team identified a non-cited violation of Catawba Nuclear Station Units 1 and 2 License Condition 2.C.5, "Fire Protection Program," for the licensee's failure to establish a leakage acceptance criteria past check valves that supported minimum, post-fire safe shutdown (SSD) design flow requirements of the standby shutdown system. The licensee entered the issue into the corrective action program as PIP C-12-7717 and conservatively limited the allowed "Total Accumulative RCS [reactor coolant system] Leakage" to gain additional standby makeup pump (SMP) flow margin.

The licensee's use of inadequate test acceptance criteria for back-leakage through check valves was a performance deficiency. The performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute in that, if backleakage through check valves 1(2)NV-46, 1(2)NV-57, 1(2)NV-68, and 1(2)NV-79 was to degrade to the allowed limits in the test procedure, the SMP would not be capable of meeting the 26 gpm reactor coolant system makeup requirement to support the standby shutdown system post-fire SSD function. The inspectors evaluated this issue in accordance with Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," and determined the finding to be of very low safety significance (Green). The finding was assigned the category of 'post-fire SSD' and a 'low degradation' rating that reflected the severity of the identified deficiency. There was no cross-cutting aspect associated with this finding because the condition existed since initial issuance of the test procedure and was not reflective of current licensee performance.

Inspection Report# : [2012007](#) (pdf)

Significance:  Sep 14, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Implementation of Procedure to Ensure EQ MOV Cycle Limit Is Not Exceeded

The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to establish a procedure to ensure that the requirements in EQMM 1393.01-A01-00, "Environmental Qualification Maintenance Manual," were not exceeded to maintain the environmental qualification of motor-operated valves (MOVs). The licensee entered the issue into the corrective action program as PIP C-12-7121, declared MOVs 1KCC37A, 1WL807B, and 2KCC37A as operable but degraded/nonconforming, and instituted guidance to periodically review the cycles of all MOVs to ensure the maximum limit is not exceeded.

The licensee's failure to establish a procedure to ensure the MOV cycle requirements of EQMM 1393.01-A01-00, were not exceeded was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of procedure quality and adversely affected the cornerstone objective in that, the lack of procedural guidance to track the cycles of MOVs resulted in 1KCC37A, 1WL807B, and 2KCC37A exceeding their environmental qualification cycle limit of 2,000 cycles and decreased the reliability and capability of the MOVs. The team assessed the finding in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Initial Characterization of Findings," and determined the finding was of very low safety significance (Green) because the performance deficiency did not result in a loss of MOV operability. The finding was associated with the cross-cutting aspect of implementation and institutionalization of operating experience in the Operating Experience component of the Problem Identification and Resolution area. [P.2(b)]

Inspection Report# : [2012007](#) (*pdf*)**Significance:**  Jun 18, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Unit 2 Offsite Power Circuits Inoperable Due to Improper Unit 1 Zone G Modification

Self-revealing findings were identified for the licensee's failure to follow EDM-141, Procurement Specifications for Services. The licensee did not identify the need for the blocking feature for the instantaneous underfrequency protective function in both the vendor specification and the supporting information provided to the vendor. The offsite power supply to Unit 1 would have been lost anytime there was a generator trip from high power without this blocking feature. This finding resulted in an apparent violation (AV) of TS 3.8.1, AC Sources – Operating, and TS 3.8.2, AC Sources – Shutdown, for Unit 2 because the installed modification resulted in inoperability of the offsite power source for both units. Unit 2 was impacted whenever offsite power was provided from Unit 1. The finding does not represent an immediate safety concern because the licensee corrected the blocking function prior to unit restart. The violation was placed in the licensee's corrective action program as PIP C-12-3403.

The performance deficiency (PD) was more than minor because it affected the availability and reliability of the Equipment Performance attribute and adversely affected the Mitigating Systems cornerstone objective in that an offsite power supply would not have been available to mitigate expected operational transients and design basis events. For Unit 2, the significance was determined to be Green. No separate cross-cutting aspect is assigned to this finding.

Inspection Report# : [2012009](#) (*pdf*)Inspection Report# : [2012010](#) (*pdf*)**Significance:**  Jun 18, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Improper Unit 2 Zone G Modification

A self-revealing finding was identified for the licensee's failure to follow EDM-141, Procurement Specifications for Services. The licensee did not identify the blocking feature for the instantaneous underfrequency protective function in both the vendor specification and the supporting information provided to the vendor. The offsite power supply to

Unit 2 would have been lost anytime there was a generator trip from high power and offsite power was provided from Unit 2 without this blocking feature. The licensee corrected the blocking function prior to unit restart.

The performance deficiency was more than minor because, if left uncorrected, it would result in a more significant safety concern in that Unit 2 would have had a LOSP anytime the generator tripped from a high power condition. The inspectors determined the finding was of very low safety significance because the programming error was corrected prior to unit restart; therefore, there was no loss of safety function. The same cross-cutting aspect for the Unit 1 finding also applies to this finding; therefore, no separate cross-cutting aspect will be assigned to this finding. Inspection Report# : [2012009](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

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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