

Peach Bottom 2 1Q/2013 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Preplanning and Performance of Maintenance/Modifications Resulted in Unavailability of RHR 'B' Loop.

The inspectors identified a Green, self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4.1, "Procedures." The inspectors determined that PBAPS did not properly preplan and perform maintenance/modifications to the Unit 2 low pressure coolant injection (LPCI) swing bus 'B' motor control cabinet (MCC) while energized. Specifically, PBAPS did not appropriately consider the potential plant impact due to sensitive energized components within the MCC that could be activated and did not utilize sufficient physical barriers to prevent such activation. Consequently, on July 25, 2012, the 'B' loop of the residual heat removal (RHR) system was declared inoperable and unavailable after workers pulling an electrical cable into the Unit 2 energized LPCI swing bus 'B' MCC inadvertently contacted and actuated the LPCI inboard injection valve motor relay. The motor operated valve (MOV) relay actuation caused a potential over-thrust event and had the potential to impact the valve's qualification and reliability. PBAPS conducted detailed examinations and diagnostic stroke testing on the MOV assembly and concluded that the design limits of the MOV assembly were not exceeded.

This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating System 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 inspectors determined that this finding was of very low safety significance (Green) because it did not represent an actual loss of safety function of a single LPCI train for greater than its TS allowed outage time. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, work control, because PBAPS did not appropriately incorporate risk insights and job site conditions that could impact plant structures, systems, and components (SSCs) into its work activities. Specifically, PBAPS did not appropriately consider and reduce the potential for an over-thrust event on the 'B' loop LPCI inboard injection valve MO-2-10-25B when performing work in the LPCI swing bus 'B' MCC while it was energized. [H.3(a)] (Section 1R13)

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

Significance: G Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Test Control to Demonstrate RCIC System Design Basis Start-up Response Time

The inspectors identified a NCV of very low safety significance of Title 10 Code of Federal Regulation (CFR) 50, Appendix B, Criterion XI, "Test Control," because Exelon conducted unacceptable pre-conditioning of the reactor core isolation cooling (RCIC) system during response time testing. The performance deficiency was related to Exelon's surveillance test (ST) procedure which required cold startup of RCIC to reach the rated pump discharge pressure and flow rate within 50 seconds. Exelon procedures required a 72 hour standby period between pump starts to ensure the pump cold start design criteria are satisfied without pre-conditioning. On numerous occasions, when the pump design parameters were not reached in less than 50 seconds on the first attempt, control room operators would routinely perform a second start attempt within a short period of time, typically less than one hour, to adjust the RCIC pump controls and attain the design values in less than or equal to 50 seconds. Exelon performed an extent of condition review of Units 2 and 3 RCIC cold start test data to ensure the current pump, valve, and flow results satisfied the response time testing requirements. The violation was entered into the corrective action program (CAP) as issue report (IR)1364066.

The performance deficiency was more than minor because it was similar to IMC 0612, Appendix E, "Examples of Minor Issues," example 2.a. Specifically, the RCIC cold start ST procedure was not implemented adequately to ensure that the RCIC pump design discharge pressure and flow were reached within the 50 second requirement on the first attempt. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance (Green) because all of the mitigating system barrier questions in Table 4.a resulted in a "no" response. The finding included a cross-cutting aspect in the area of Work Practices, Human Performance component, because Exelon did not effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, Exelon took credit for the Unit 2 ST performed on April 7, 2011, which started and shutdown RCIC three times in less than 72 hours to satisfy the response time testing acceptance criteria. On January 20, 2011, the same test was performed for Unit 3, when the RCIC system was run two times prior to satisfying the acceptance criteria. Exelon did not identify the unacceptable pre-conditioning of the RCIC system start-up time for either test because personnel did not follow the In-service Testing (IST) Program Corporate Technical Position procedure. (Section 1R22) [H.4(b)]
Inspection Report# : [2012003](#) (*pdf*)

Barrier Integrity

Significance: G Mar 31, 2013

Identified By: NRC

Item Type: FIN Finding

Inadequate Operability Determination in Response to Power Load Unbalance Device Failure

The inspectors identified a Green finding for PBAPS's failure to follow the operability determination (OD) process described in Procedure OP-AA-108-115, "Operability Determinations." Specifically, on February 24, 2013, between

6:15 a.m. and 10:30 a.m., an immediate determination of operability was not made in a timely manner, and was not initially documented in accordance with the corrective action process (CAP), following discovery that Unit 2 was operating outside of the analyzed limits specified in the core operating limits report (COLR) with the power load unbalance (PLU) circuit out of service (OOS). Consequently, operators entered the Unit 2 minimum critical power ratio (MCPR) technical specification limiting condition for operation (TS LCO) 3.2.2, Condition A, after exceeding the two-hour required action completion time. The inspectors determined that the immediate determination of operability was not performed in a matter commensurate with the safety significance of the two-hour LCO required action completion time. The inspectors determined that this was not a violation of TSs because subsequent analysis by a third party vendor determined that MCPR thermal limits were satisfied between 85 percent and 100 percent reactor power with the PLU circuit OOS on Unit 2.

This finding is more than minor because it is associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that the physical design barriers (fuel cladding) protect the public from radionuclide releases caused by events. Using IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and IMC 0609, Appendix A, "The SDP for Findings At-Power," the inspectors determined that this issue screened to Green, because it was associated only with the fuel cladding barrier. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, decision-making, because PBAPS did not use conservative assumptions in decision making and did not adopt a requirement to demonstrate that the proposed action was safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disprove the action [H.1(b)]. (Section 1R13)

Inspection Report# : [2013002](#) (*pdf*)

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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