Peach Bottom 2
4Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Apr 24, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Initiate IRs for Out-of-Calibration Single Point Vulnerabilitys.
The inspectors identified a finding of very low safety significance (Green) because PBAPS did not initiate issue reports (IR) to identify out-of-tolerance conditions for a number of single point vulnerability (SPV) instruments. An SPV instrument is any instrument for which a single failure could initiate a plant transient or cause a plant scram. Specifically, during routine preventative maintenance (PM) calibrations, certain SPV instruments' as-found data was found outside expected tolerance bands, with many being significantly outside of their bands. In most cases, IRs were not written to document these adverse conditions contrary to station guidance.
The finding is determined to be more than minor because it affected the reliability of the initiating cornerstone's attribute of equipment performance and affected its objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, by not identifying and trending out-of calibration SPVs in a timely manner, a resulting transient from the loss of a single feed pump or a single reactor recirculation pump is more likely to occur. The inspectors conducted a Phase 1 screening in accordance with NRC Inspection Manual Chapter (IMC) Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because the finding did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition (e.g. loss of condenser, loss of feed water.) A loss of a single feed pump or a single recirculation pump typically results in a power reduction but not a reactor scram.
The inspectors determined that the finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Identification. In the case of the finding, PBAPS did not ensure that degraded conditions, namely, out of tolerance SPV instruments, were promptly reported and documented in the corrective action program at a low threshold. (P.1)
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Inspection Report# : 2015008 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Ensure Design Basis of EDG Lubrication System
The inspectors identified a non-cited violation (NCV) of very low safety significance of 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion III, "Design Control," for not ensuring that the adequacy of PBAPS' emergency diesel generator (EDG) lubrication oil (LO) supply was designed to withstand the effects of natural phenomena. Specifically, additional LO, evaluated by PBAPS to meet their EDG technical specification (TS) mission time of seven days of continuous operation, was housed in a non-class I structure that would be unable to

withstand the effects of natural phenomena. PBAPS entered the issue into the correction action program (CAP) as issue report (IR) 02603369 and took immediate corrective actions to relocate the LO reserve inventory from their warehouse to the 135' elevation of the PBAPS' radwaste building, which is a seismic class I structure

The finding is considered more than minor because it is associated with the Protection Against External Factors attribute of the Reactor Safety Mitigating Systems cornerstone and adversely affected the cornerstone's objective of ensuring reliability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors evaluated the significance of this finding using IMC 0609 Appendix A, "The SDP for Findings at Power," Exhibit 2, "Mitigating Systems Screening Questions." The inspectors determined that this finding was of very low safety significance (Green) because the finding is a design deficiency which did not result in an actual loss of functionality of the EDGs. This finding did not have a cross-cutting aspect because the most significant contributor of the performance deficiency (PD) occurred during the 1994 conversion to improved technical specifications (ITS) and, thus, was not reflective of plant performance. Specifically, PBAPS' current engineering change request (ECR) process would evaluate for natural phenomena considerations such as seismic, tornado, flood, etc. (Section 1R22)
Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Incomplete Testing of Components from the Remote Shutdown Panels
The inspectors identified a Green NCV of Technical Specification (TS) 5.4.1.a after Exelon did not establish and implement procedures to adequately test the Unit 2 and Unit 3 remote shutdown panels (RSPs). Specifically, Exelon's surveillance procedure did not test all the control circuits, as required by Surveillance Requirement (SR) 3.3.3.2.1, for the Unit 2 and Unit 3 RSPs. Exelon's corrective actions included entering this issue into their CAP, the development of RSP testing procedures for the reactor core isolation cooling (RCIC), control rod drive (CRD), and emergency service water (ESW) system components, and a revision to the bases for TS 3.3.3.2.

The performance deficiency (PD) was determined to be more-than-minor because it was associated with the 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. Additionally, examples 1.c, 4.l, and 4.m from IMC 0612, Appendix E, detail that a PD was more than minor if required TS surveillance testing is not performed and subsequent testing reveals that the equipment is out of specification or otherwise unable to perform a safety-related function. A detailed risk evaluation concluded that the issue was of very low safety significance (Green). This finding had a cross-cutting aspect in Human Performance, Avoid Complacency, because Exelon failed to recognize and plan for the possibility of latent problems. [H.12] (Section 1R15)

Inspection Report# : 2015003 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Scope Flood Detection Level Switches into Maintenance Rule
The inspectors identified a non-cited violation (NCV) of very low safety significance (Green) of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Exelon did not include certain flood indication functions into the scope of the maintenance rule (MR). Specifically, level switches used to indicate flood levels in the Unit 2 and Unit 3 emergency core cooling system (ECCS) rooms were not included in the scope of the MR as required by 10 CFR 50.65 (b)(2)(i) as non-safety related components that are used in plant

emergency operating procedures (EOPs). PBAPS entered the issue into their corrective action program (CAP) as issue reports (IRs) 02433897 and 02437502 and scoped the level switches into the MR.

The finding is determined to be more than minor because it is associated with the protection against external factors attribute of the Mitigating Systems cornerstone and affected the cornerstone's objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). In the case of this finding, monitoring of components that provide alarm indication to operators during a flood hazard were not incorporated into the MR. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," and determined the issue was similar to example 7.d; in that, flood detection was not within the scope of the MR and that one of the flood detectors had experienced performance problems during preventive maintenance (PM) testing . The inspectors conducted a Phase 1 screening in accordance with IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green), because the finding was not a design or qualification deficiency, did not represent an actual loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its Technical Specification (TS) allowed outage time, and did not screen as risk significant due to external initiating events. The inspectors determined that the finding had a cross-cutting aspect in the area of Human Performance, Change Management because PBAPS did not use a systematic process for evaluating and implementing a change. Specifically, during PBAPS's MR database update and monitoring criteria development for new functions, PBAPS did not ensure that certain level switches that provide alarms for flooding used in plant EOPs were scoped into the MR despite identifying that it was required.
[H.3] (Section 1R12)
Inspection Report# : 2015001 *(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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