# Peach Bottom 2
# 2Q/2015 Plant Inspection Findings

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## 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)*

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## Mitigating Systems

**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)*

**Significance:** G Sep 30, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
**Corrective Actions Not Timely for EOC of Appendix R Broken Wires**
The inspectors identified a Green non-cited violation (NCV) of the PBAPS Units 2 and 3 operating licenses, Section 2.C.4, "Fire Protection," because Exelon did not have the ability to implement all provisions of their approved Fire Protection Program as described in the Updated Final Safety Analysis Report (UFSAR). Specifically, UFSAR Section 5.2.2, Appendix R, "Shutdown Method D," was found degraded due to the loss of the alternate 125 volts direct current (Vdc) control power to both E-2 and E-4 alternate shutdown panels. The alternate 125 Vdc power was found degraded during a planned inspection due to broken electrical wires located in the safety-related E-23 4.16 kilovolt (kV) breaker cubicle associated with the E-2 alternate shutdown panel. The extent-of-condition (EOC) corrective actions were not timely to identify and correct similar broken wires in the E-43 4.16 kV breaker cubicle associated with the E-4 alternate shutdown panel. PBAPS entered the following issue reports (IRs) into their corrective action program (CAP): IR 01629839, 01656255, 01662555, and 01662767. Exelon completed repairs of the broken wires in both electrical breaker cubicles.

The finding is more than minor because it is associated with the external events (fire) attribute of the Mitigating Systems 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. Specifically, following a postulated control room abandonment fire, the analyzed normal method was unavailable for closing three 4 kV circuit breakers locally with the switchgear mounted switch. Using IMC 0609, Appendix F, "Fire Protection SDP," the Region I Senior Reactor Analyst (SRA) determined per Figure F.1, "Phase 1 Flow Chart," and associated screening criteria that this finding is
of very low safety significance (Green). The inspectors determined that this finding had
a cross-cutting aspect in the area of Problem Identification and Resolution (PI&R), Evaluation, because Exelon did not complete the EOC action in a timely manner commensurate with its safety significance. Specifically, the decision to implement corrective actions to address the EOC two months after the identification of the first breaker cubicle

broken wire was not timely and commensurate with its safety significance. Additionally, the condition potentially existed for a longer period of time, but was not identified by established maintenance procedures. Even though the E-43 4.16 kV breaker wires could be checked without affecting the operability or availability of the E-4 emergency diesel generator (EDG), Exelon decided to perform the E-43 4.16 kV EDG breaker cubicle inspection during a future scheduled overhaul. Exelon's corrective action procedure defines an "immediate" EOC concern when, as in this case, a work group evaluation (WGE) is required. [P.2 PI&R, Evaluation]

Inspection Report# : 2014004 *(pdf)*

**Significance:** G Sep 30, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
**Scaffold Obstructs 'A' RHR Discharge Check Valve**
A self-revealing finding was identified involving an NCV of very low safety significance (Green) for Technical Specification (TS) 5.4.1 "Procedures," because Exelon did not correctly implement procedure MA-MA-796-024-1001, Revision 8, "Scaffold Criteria for the Mid-Atlantic Stations." In addition, work order (WO) C0244158, "Open/Close CHK-2-10-48A for OPS Torus Support," instructions were not implemented as written to remove a gag (i.e., eyebolt) on the Unit 2 'A' residual heat removal (RHR) pump discharge check valve, CHK-2-10-48A, following restoration of the 2 'A' RHR system after a September 16, 2012, maintenance and fill activity. By not implementing these procedures and instructions, the eyebolt prevented full closure of CHK-2-10-48A after the 2 'A' RHR pump was secured. Exelon entered these issues into their CAP as IR 1680741, IR 1690648, and action request (AR) 02387793. Exelon removed the eyebolt and scaffold midrail to prevent any obstruction of movement on CHK-2-10-48A.

The finding is more than minor because it affected the Mitigating Systems cornerstone attribute of equipment performance in the area of reliability and availability of the 2 'A' RHR train. Specifically, due to the stuck open check valve during a postulated loss of coolant accident (LOCA)/loss of offsite power (LOOP) scenario, voiding could occur and create a potential water hammer resulting in pipe support damage. This finding was determined to be of very low safety significance (Green) using IMC 0609, Appendix A, Exhibit 2, because the finding did not represent a loss of system function, did not represent a loss of a single train for greater than its allowed TS outage time, and did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event. Additionally, the inspectors determined that the function of 2 'A' RHR remained available because RHR piping would remain intact and containment cooling would not have been lost during the postulated water hammer scenario. The finding has a cross-cutting aspect in Human Performance, Work Management, because in the case of the erected scaffold, Exelon did not plan, control, and execute work activities such that nuclear safety was the overriding priority. Specifically, the work process did not coordinate effectively with different groups (i.e., operations, engineering, scaffold builders, and maintenance) and job activities to identify and preclude the scaffold from obstructing an eyebolt attached to the swing arm of the 2 'A' RHR pump discharge check valve. [H.5 Human Performance, Work Management]

Inspection Report# : 2014004 *(pdf)*

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# Barrier Integrity

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# Emergency Preparedness

**Significance:** G Sep 30, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
**Inadequate Evacuation Time Estimate Submittals**
The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (10 CFR) 50.54(q)(2), 10 CFR 50.47(b)(10), and 10 CFR Part 50, Appendix E, Section IV.4, for failing to maintain the effectiveness of the PBAPS, Units 2 and 3, Emergency Plan. The station did not provide the evacuation time estimate (ETE) to the responsible offsite response organizations (OROs) by the required date. Exelon entered this issue into its CAP as IR 1525923 and IR 1578649. Additionally, Exelon re-submitted a new revision of the Peach Bottom ETE to the NRC on May 2, 2014.

The performance deficiency is more than minor because it is associated with the Emergency Preparedness cornerstone attribute of procedure quality and it adversely affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding was determined to be of very low safety significance (Green) because it was a failure to comply with a non-risk significant portion of 10 CFR 50.47(b)(10). The cause of the finding is related to the cross-cutting element of Human Performance, Documentation, because Exelon did not appropriately create and maintain complete, accurate and, up-to-date documentation [H.7 Human Performance, Documentation] (Section 1EP5)

Inspection Report# : 2014004 *(pdf)*

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# Occupational Radiation Safety

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# Public Radiation Safety

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# 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.

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# Miscellaneous

Last modified : August 07, 2015