# Peach Bottom 3
# 2Q/2014 Plant Inspection Findings

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## Initiating Events

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## Mitigating Systems

**Significance:** G Apr 04, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
**Deficient E2 EDG Loading Calculation Design**
The team identified a Green non-cited violation of Title 10 Code of Federal Regulations 50, Appendix B, Criterion III, Design Control, for failure to verify and ensure that the emergency diesel generators (EDGs) were capable of performing their design safety functions at the limits of voltage and frequency allowed by Technical Specifications (TS). Specifically, the existing EDG loading calculation permitted the E2 EDG and associated bus to be loaded up to 3100 KW at nominal frequency and voltage. At the maximum frequency and voltage values permitted by TS, the calculation-allowed maximum load would have exceeded the EDG 30-minute rating limit of 3250 KW and potentially damaged the EDG. Immediate corrective actions included evaluation of EDG loading for TS maximum voltage and frequency and changing design calculation PE-0166 to reduce the maximum permitted E2 EDG load from 3100 kW to 3052 kW at nominal voltage and frequency. Exelon entered the issue into their corrective action program (issue report 1638255) to evaluate the adequacy of the design and ensure that the allowed maximum diesel loading would not exceed the design capabilities of the diesels.

The finding was more than minor because it was associated with the Mitigating Systems Cornerstone attribute of design control and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of the emergency diesels to respond to initiating events to prevent undesirable consequences. The team evaluated the finding in accordance with Inspection Manual Chapter (IMC) 0609, Significance Determination Process, Attachment 0609.04, Initial Characterization of Findings, dated June 19, 2012, for the Mitigating Systems Cornerstone, and IMC 0609, Appendix A, The Significance Determination Process (SDP) for Findings At-Power, dated June 19, 2012. The team determined the finding was of very low safety significance because it was a design deficiency confirmed not to result in a loss of EDG operability. This team assigned a cross-cutting aspect associated with this finding because the performance deficiency continued during the 2012 assessment of WCAP-17308-NP and was reflective of current performance. The team determined this finding had a crosscutting aspect in the area of Problem Identification and Resolution, Evaluation (PI.2), because engineers did not thoroughly evaluate the EDG loading issue and ensure the resolution addressed its cause commensurate with the safety significance. Specifically, Exelon relied on invalid assumptions to determine the issue was not applicable, and did not thoroughly evaluate the technical issue addressed in the WCAP. (Section 1R21.2.1.1)
Inspection Report# : 2014007 *(pdf)*

**Significance:** G Apr 04, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
**Non-Conservative Voltage Assumption Used to Verify MOV Capability**
The team identified a Green non-cited violation of Title 10 Code of Federal Regulations 50, Appendix B, Criterion III, Design Control. Specifically, Exelon did not correctly verify the capability of alternating current motor-operated valves (MOVs) at a degraded voltage corresponding to the lowest voltage allowed by plant Technical Specification setpoints for the degraded grid voltage relays. Exelon initiated issue report 1642720 to evaluate the adequacy of their design and determined that 9 out of the 130 alternating current MOV program valves required further evaluation. The licensee performed an operability evaluation of the affected MOVs, assuming the appropriate voltage, and determined that, although significant design margin was lost, all MOVs remained operable.

The finding was more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of design control and adversely affected the cornerstone objective of ensuring the capability of the 480 volt alternating current (AC) MOVs to respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance because it was a design deficiency confirmed not to result in a loss of operability. The team assigned a cross-cutting aspect associated with this finding, because the deficient AC MOV operability evaluations were completed in November 2011 and were reflective of current performance. The finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation (PI.2), because Exelon did not thoroughly evaluate the issue addressed in a previous NCV contained in NRC Inspection Report 2010004, during 2011, for PBAPS such that, the resolution addressed causes and extent-of-condition commensurate with the safety significance. Specifically, the affected MOVs were not evaluated at the required voltage in operability evaluations performed following receipt of a non-cited violation.
(Section 1R21.2.1.2)
Inspection Report# : 2014007 *(pdf)*

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# Barrier Integrity

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# Emergency Preparedness

**Significance:** G Sep 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
**Inadequate EP Procedure Change Management Controls to Ensure Adquate EAL Classification and Assessment Capability for Effluent Parameters**
The inspectors identified a Green non-cited violation (NCV) of Title 10 of the Code of Federal Regulation (CFR) 50.54(q)(2) associated with 50.47(b)(4) because PBAPS failed to control emergency planning (EP) procedure changes in a manner that would ensure timely emergency action level (EAL) classification for effluent parameters. On June 27, 2013, PBAPS issued Revision 27 to EP-AA-1007, “Exelon Nuclear Radiological Emergency Plan Annex for PBAPS.” One of the plan changes involved removal of the 'A' ventilation and main stack radiation monitors from

radiological effluent EAL matrix Table 3-1, and thereby rendered the 'B' ventilation and main stack radiation monitors as the only means of EAL classification for effluent releases. On July 24, 2013, the inspectors questioned shift operations on whether the ability to make timely and accurate EAL classifications was impacted with the 'B' reactor building (RB) ventilation stack radiation monitor inoperable. Shift operations did not have an immediate response, but later in the same shift provided a response to the inspectors that compensatory measures were required for degraded EP equipment, and the 'A' ventilation stack radiation monitor was established as a compensatory measure for the inoperable 'B' monitor in response to questions by the inspectors. Following the inspector's questions, PBAPS initiated issue report (IR) 1539674 to capture programmatic deficiencies that were revealed as a result of the inspector's questions. PBAPS corrective actions included a revision to the PBAPS Emergency Plan, a revision to the EP compensatory measure procedure, issuance of Operations Information Update (OIU) 13-10 to the shift managers (SMs) to clarify the purpose of the compensatory measure procedure, and an assignment to incorporate the latest revision of the compensatory measure procedure into licensed operator training program curriculum review committee (CRC).

This finding was more than minor because it was associated with the procedure quality attribute of the Emergency Preparedness cornerstone, and adversely affected the associated cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the public health and safety in the event of a radiological emergency. Using IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and IMC 0609, Appendix B, "Emergency Preparedness SDP," the inspectors determined that this finding was of very low safety significance (Green) using Table 5.4.1. Specifically, this finding rendered an EAL ineffective such that an unusual event (UE) declaration could be delayed. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, Work Control, because PBAPS did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities, and the need for work groups to communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance [H.3(b)]. Specifically, the impact of a PBAPS Emergency Plan Annex revision was not communicated properly or coordinated between the EP department and operations department, to assure that shift operations could implement compensatory measures as necessary for degraded EP equipment [H.3.(b)]. (Section 1R22)

Inspection Report# : 2013004 *(pdf)*

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# Occupational Radiation Safety

**Significance:** G Sep 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
**Failure of Conspicuously Post and Lost/Guard a HRA on the Unit 3 Turbine Deck Scaffold.**
The inspectors identified a NCV of very low safety significance of Technical Specification (TS) 5.7.2 because Exelon did not control the access point to a Locked High Radiation Area (LHRA). The performance deficiency (PD) was related to not controlling access to a Unit 3 LHRA. The LHRA became accessible when temporary scaffold was built on the south shield wall between the electrical generator and the main turbine. On August 19, the inspectors identified a permanent ladder from the top of the north side of the shield wall to the turbine deck floor that could allow access to the LHRA. Radiation Protection (RP) procedure RP-AA-460, "Controls for High and LHRA," Revision 24, provides guidance for the control of high radiation areas (HRAs). By the procedure definition of accessible area, the area was accessible after the scaffold was built, and no tools or other exceptional measures were needed to gain access. The violation was entered into Exelon's corrective action program (CAP) as action request (AR) 01548397.

The PD was more than minor because it is associated with the cornerstone attribute of Program and Process (RP controls), and negatively affected the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear power operation. There was also an example of this PD in example 6.g. of IMC 0612, Appendix E, "Examples of Minor Issues." This example concludes that the issue is more than minor because actual dose rates in excess of the posting requirements existed in the area. LHRAs are required to be posted and controlled properly to avoid unnecessary worker exposure. The finding was evaluated using the Occupational Radiation Safety SDP and was determined to be of very low safety significance (Green) because it was not related to As Low As is Reasonably Achievable (ALARA) planning, it did not involve an overexposure, did not constitute a substantial potential for overexposure, and the ability to access dose was not compromised. The finding included a cross-cutting aspect in the area of Work Controls, Human Performance component, because Exelon did not appropriately plan the work activities and identify the potential job site conditions (radiological hazards) associated with building scaffold next to a LHRA wall [H.3.(a)]. (Section 4OA5)

Inspection Report# : 2013004 *(pdf)*

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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 29, 2014