

## Three Mile Island 1

### 4Q/2013 Plant Inspection Findings

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## Initiating Events

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## Mitigating Systems

**Significance:**  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Material Storage in Reactor Building**

Green. The inspectors identified a Green non-cited violation of Technical Specification 6.8.1 for Exelon's failure to implement procedure requirements governing storage of equipment in Class 1 structures. Specifically, Exelon stored unsecured material, one (1) roll of plastic sheeting and three (3) plastic sheets, in the Reactor Building (RB) during power operations, contrary to Exelon Procedure 1015, "Equipment Storage Inside Class 1 Buildings." This resulted in unsecured material in a location that had the potential, during a large break loss of coolant accident, to be transported to and adversely impact the performance of the emergency core cooling system (ECCS) suction sump. Exelon documented the issue in their corrective action program under issue report (IR) 1577437 and took immediate corrective actions to remove the unsecured plastic from the RB.

This finding is more than minor because it is associated with the availability and reliability attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the unsecured plastic had the potential to impact the reliability and availability of the ECCS recirculation suction flow path, due to the potential increased debris loading. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, and determined this finding is very low safety significance (Green) because the degraded condition is a design deficiency that affects system operability, but did not represent an actual loss of function of a system; did not represent an actual loss of function of a single train or two separate trains for greater than its technical specification allowed outage time and did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because Exelon did not take adequate corrective actions to address the cause of improperly staged material in the RB (IR 1577100), resulting in a subsequent recurrence of improper staging of additional material in the RB identified by the inspectors (IR 1577437). [P.1(d)]. (Section 1R20)

Inspection Report# : [2013005](#) (*pdf*)

**Significance:**  Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Maintain Combustible Loading near the 'B' CST within FHAR Limits**

[Draft] Green. The inspectors identified a Green non-cited violation (NCV) of license condition DPR-50 section 2.C.

(4), Fire Protection, for Exelon's failure to maintain transient combustible loading within fire loading limits near the 'B' condensate storage tank (CST). Specifically, on January 9, the inspectors identified a Portable On-Demand storage (POD) container staged within 50 feet of the 'B' CST. Specifically, the POD and its contents contained substantial transient combustible materials in excess of the allowed fire loading in accordance with the FHAR. The inspectors determined that the failure to maintain transient combustible loading in the restricted area around the 'B' CST within the FHAR limits was a performance deficiency that was within Exelon's ability to foresee and correct. Exelon promptly removed the POD container and restored transient combustible loading within allowable limits. Exelon entered this issue into their corrective action program under IR 1461029. Corrective actions included additional postings around the safety-related above-ground tanks, site-wide notifications and the performance of a root cause evaluation to address recent station fire protection issues.

This performance deficiency is more than minor because it is associated with the Protection Against External Factors (Fire) attribute and adversely affected the Mitigating Systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition, it was determined to be more than minor since it is similar to more than minor example 4.k of Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix E because the fire loading was not within the FHAR limits. In accordance with Inspection Manual Chapter (IMC) 0609.04, "Phase 1 – Initial Screen and Characterization of Findings," the inspectors determined the finding affected the administrative controls for transient combustible materials. Therefore, the inspectors conducted a phase 1 SDP screening using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and the inspectors determined that the finding affected the category of Fire Prevention and Administrative Controls in that combustible material was not being properly controlled, the finding had a "low" degradation rating, and the finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because Exelon failed to thoroughly evaluate and take appropriate corrective actions for similar transient combustible loading issues such that the cause and extent of condition are fully addressed. [P.1(c)]

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

## Barrier Integrity

**Significance:**  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Perform Leak Rate Testing on Close Loop Piping**

Green. The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors, for Exelon's failure to establish an adequate program that leak tested components penetrating the primary containment pressure boundary. Specifically, Exelon failed to implement leak rate testing of the reactor building (RB) normal closed loop cooling piping to verify piping integrity to support its containment isolation function. As a result, on November 10, 2013, engineering personnel identified an inoperable containment isolation boundary due to a degraded RB closed cooling piping condition. Exelon documented this issue in issue report (IR) 1598590 and took corrective actions to revise the Appendix J test program and address the missed leak rate surveillance test.

This finding is more than minor because it is associated with the Barrier Performance attribute of the Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical barriers, as designed, protect the public from radionuclide releases caused by accidents or events. Specifically, Exelon failed to perform leak rate testing of the RB normal closed loop cooling piping and failed to identify the degraded piping condition that

impacted the containment isolation function. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 3 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that the finding did not represent an actual open pathway in the physical integrity of the reactor containment isolation system nor did it involve an actual reduction in function of hydrogen recombiners for the reactor containment therefore, the finding was of very low safety significance (Green). The finding was not assigned a cross-cutting aspect because the most significant causal factor of the finding was the failure to implement leak rate testing since 1991 and was not indicative of current plant performance. (Section 1R22)

Inspection Report# : [2013005](#) (*pdf*)

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## **Emergency Preparedness**

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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**

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