



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

June 6, 2016

Mr. Bryan Hanson  
Senior Vice President, Exelon Generation  
President and Chief Nuclear Officer, Exelon Nuclear  
4300 Winfield Rd.  
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION – EVALUATED  
EMERGENCY PREPAREDNESS EXERCISE INSPECTION REPORT  
05000277/2016502 AND 05000278/2016502

Dear Mr. Hanson:

On April 29, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the April 27, 2016, evaluated emergency preparedness exercise at your Peach Bottom Atomic Power Station (PBAPS). The enclosed inspection report documents the inspection results, which were discussed on April 29, 2016, with Mr. Michael Massaro, Peach Bottom Site Vice President, and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with Title 10 of the *Code of Federal Regulation* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the

B. Hanson

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Sincerely,

*/RA/*

Raymond R. McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket Nos. 50-277 and 50-278  
License Nos. DPR-44 and DPR-56

Enclosure:  
Inspection Report No. 05000277/2016502  
and 05000278/2016502

cc w/encl:

Distribution via ListServ

G. Cannon, Director, PA Emergency Management Agency (PEMA) and  
Office of Homeland Security Advisor

J. Price, (Acting) RAC Chair, DHS Region III

R. Ayers, Deputy Mgr, Harford County Div of Emergency Operations

S. Ayers, Emergency Planner, Harford County Div of Emergency Operations

R. Brooks, Director, Cecil County Dept of Emergency Services

T. Scardino, RAC Chair, FEMA Region III

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**U.S. NUCLEAR REGULATORY COMMISSION****REGION I**

Docket Nos. 50-277 and 50-278

License Nos. DPR-44 and DPR-56

Report Nos. 05000277/2016502 and 05000278/2016502

Licensee: Exelon Generation Company, LLC (Exelon)

Facility: Peach Bottom Atomic Power Station, Units 2 and 3

Location: Delta, Pennsylvania

Dates: April 26 – 29, 2016

Inspectors: S. Barr, Senior Emergency Preparedness Inspector, Division of  
Reactor Safety (DRS), Region I (Lead)  
J. DeBoer, Emergency Preparedness Inspector, DRS, Region I  
D. Everhart, Physical Security Inspector, DRS, Region I  
T. Dunn, Operations Inspector, DRS, Region I  
J. Heinly, Senior Resident Inspector, Peach Bottom, Division of Reactor  
Projects, Region I

Approved By: Raymond R. McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

## **SUMMARY OF FINDINGS**

Inspection Report 05000277/2016502 and 05000278/2016502; 04/26/2016 – 04/29/2016; Peach Bottom Atomic Power Station (Peach Bottom), Units 2 and 3; Exercise Evaluation; Exercise Evaluation – Scenario Review; Performance Indicator Verification.

This was an announced inspection conducted by four Region I-based inspectors and one resident inspector. No findings were identified during the inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

### **Cornerstone: Emergency Preparedness**

No findings were identified.

## REPORT DETAILS

### 1. REACTOR SAFETY

#### Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation (71114.01 – 1 sample)

##### a. Inspection Scope

On April 27, 2016, Exelon conducted a biennial Peach Bottom emergency preparedness exercise. The inspectors evaluated the adequacy of the licensee's conduct of the exercise, the performance of the Peach Bottom emergency response organization (ERO) to respond to the simulated emergency, and Exelon's capability to assess their own staff performance via a formal critique process, as required by Title 10 of the *Code of Federal Regulations* (CFR) 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The exercise evaluation consisted of the following review and assessment:

- The adequacy of Exelon's performance in the biennial full-participation exercise regarding the implementation of the planning standards described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; onsite protective actions; and public protective action recommendations, respectively.
- The overall adequacy of Exelon's emergency response facilities with regard to Emergency Plan commitments. The emergency response facilities assessed were: the Control Room Simulator, the Technical Support Center, and the Emergency Operations Facility.
- A review of other performance areas, such as: the licensee ERO's recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and the overall implementation of the emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC Peach Bottom exercise inspection report and Exelon's EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the April 27, 2016, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- A review of the licensee's post-exercise critiques, to evaluate Exelon's self-assessment of its Peach Bottom ERO performance during the April 27, 2016, exercise and to ensure compliance with 10 CFR Part 50, Appendix E, Section IV.F.2.g. The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08 – 1 sample)

a. Inspection Scope

Prior to the April 27, 2016, emergency preparedness exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario, which Exelon had submitted to the NRC, to determine if the exercise would test major elements of the Peach Bottom Emergency Plan as required by 10 CFR 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator Verification (71151 – 3 samples)

a. Inspection Scope

The inspectors reviewed data for the Peach Bottom EP performance indicators (PIs), which are: (1) Drill and Exercise Performance (EP01); (2) ERO Drill Participation (EP02); and (3) Alert and Notification System Reliability (EP03). The last NRC EP inspection at Peach Bottom was conducted in the first calendar quarter of 2015, so the inspectors reviewed supporting documentation from EP drills and tests from the first calendar quarter of 2015 through the first calendar quarter of 2016, to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151, using the acceptance criteria documented in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 7.

This inspection activity represented the completion of three samples.

b. Findings

No findings were identified.

4OA6 Meetings, including Exit

On April 29, 2016, the inspectors presented the results of this inspection to Mr. M. Massaro, Peach Bottom Site Vice President, and other members of the Exelon staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

**ATTACHMENT: SUPPLEMENTAL INFORMATION**

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

M. Massaro, Peach Bottom Site Vice President  
V. Cwietniewicz, Exelon Mid-Atlantic Emergency Planning Manager  
N. Alexakos, Peach Bottom Emergency Planning Manager

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None.

### LIST OF DOCUMENTS REVIEWED

#### Section 1EP1: Exercise Evaluation

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan, Revision 26  
EP-AA-1007, Peach Bottom Atomic Power Station Emergency Plan Annex, Revision 28  
EP-AA-122, Drill and Exercise Program, Revision 15  
EP-AA-122-200, Drill and Exercise Execution, Revision 0  
EP-AA-122-300, Drill and Exercise Evaluation, Revision 0  
Peach Bottom Emergency Plan Implementing Procedures  
Peach Bottom April 27, 2016, Emergency Exercise Scenario Package  
Peach Bottom Emergency Preparedness Drill Reports, January 2015 - March 2016  
Condition Reports generated as a result of the April 27, 2016, exercise  
(As documented in Peach Bottom Graded Exercise Evaluation Report, dated  
May 26, 2016)

#### Section 1EP8: Exercise Evaluation – Scenario Review

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan, Revision 24  
EP-AA-1007, Peach Bottom Atomic Power Station Emergency Plan Annex, Revision 28  
EP-AA-122, Drill and Exercise Program, Revision 15  
EP-AA-122-100, Drill and Exercise Planning and Scheduling, Revision 0  
Peach Bottom April 27, 2016, Emergency Exercise Scenario Package

#### Section 40A1: Performance Indicator (PI) Verification

LS-AA-2110, Monthly Data Elements for NRC Emergency Response Organization (ERO) Drill  
Participation, Revision 6  
LS-AA-2120, Monthly Data Elements for NRC Drill/Exercise Performance, Revision 4  
LS-AA-2130, Monthly Data Elements for NRC Alert and Notification System (ANS)  
Reliability, Revision 5  
EP-AA-125-1001, EP Performance Indicator Guidance, Revision 7  
DEP PI data, January 2015 – March 2016  
ERO Drill Participation PI data, January 2015 – March 2016  
ANS Reliability PI data, January 2015 – March 2016



**LIST OF ACRONYMS**

CFR	<i>Code of Federal Regulations</i>
EP	Emergency Preparedness
ERO	emergency response organization
NRC	Nuclear Regulatory Commission, U.S.
PI	performance indicator