

May 12, 2006

Mr. Christopher M. Crane  
President and CNO  
Exelon Nuclear  
Exelon Generation Company, LLC  
200 Exelon Way KSA 3-E  
Kennett Square, PA 19348

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION - NRC EVALUATED  
EMERGENCY PREPAREDNESS EXERCISE INSPECTION REPORT  
05000277/2006010, 05000278/2006010

Dear Mr. Crane:

On April 28, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of your full-scale biennial Emergency Preparedness exercise that occurred at your Peach Bottom Atomic Power Station, Units 2 and 3 on April 25, 2006. The enclosed inspection report documents the inspection results, which were discussed with Mr. J. Grimes, Site Plant Manager, and other members of your staff during an exit meeting held on April 28, 2006.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed emergency plan procedures, previous drill reports, observed the exercise activities, and interviewed selected emergency preparedness personnel from your staff.

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

In accordance with 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 Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Raymond K. Lorson, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket Nos. 50-277; 50-278  
License Nos.: DPR-44, DPR-56

C. Crane

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Enclosure: Inspection Report 05000277/2006010, 05000278/2006010  
w/Attachment: Supplemental Information

cc w/encl:

Site Vice President, Peach Bottom Atomic Power Station  
Plant Manager, Peach Bottom Atomic Power Station  
Regulatory Assurance Manager - Peach Bottom  
Associate General Counsel, Exelon Generation Company  
Manager, Financial Control & Co-Owner Affairs  
Manager Licensing, PBAPS  
Director, Nuclear Training  
Correspondence Control Desk  
Director, Bureau of Radiation Protection (PA)  
R. McLean, Power Plant and Environmental Review Division (MD)  
R. Fletcher, Maryland Department of Environment  
T. Snyder, Director, Air and Radiation Management Administration,  
Maryland Department of the Environment (SLO, MD)  
Public Service Commission of Maryland, Engineering Division  
Board of Supervisors, Peach Bottom Township  
B. Ruth, Council Administrator of Harford County Council  
Mr. & Mrs. Dennis Hiebert, Peach Bottom Alliance  
TMI - Alert (TMIA)  
J. Johnsrud, National Energy Committee, Sierra Club  
Mr. & Mrs. Kip Adams  
Vice President, Licensing and Regulatory Affairs  
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DATE	05/12/06		05/12/06					

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-277, 50-278

License Nos: DPR-44, DPR-56

Report Nos. 05000277/2006010, 05000278/2006010

Licensee: Exelon Generation Company, LLC  
Correspondence Control Desk  
200 Exelon Way, KSA 1-1  
Kennett Square, PA 19348

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

Location: 1848 Lay Road  
Delta, Pennsylvania

Dates: April 25-28, 2006

Inspectors: N. McNamara, DRS (Team Leader)  
G. Johnson, Operator Licensing Examiner, DRS  
F. Bower, Senior Resident Inspector, Peach Bottom, DRP  
Steve Barr, Senior Emergency Preparedness Inspector, DRS

Observer: Janelle Jesse, Incident Response Coordinator, NSIR

Approved by: Raymond K. Lorson, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000277/2006010, 05000278/2006010; 05/25/2006 - 05/28/2006; Peach Bottom Atomic Power Station; Emergency Preparedness Exercise; Performance Indicator Verification.

The report covered an inspection by three regional inspectors and one resident inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-5949, "Reactor Oversight Process," Revision 3, dated August 2000.

a. NRC-Identified Findings

**Cornerstone: Emergency Preparedness**

None

b. Licensee-Identified Findings

None

## Report Details

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation (1 Sample)

##### a. Inspection Scope

Prior to the exercise, the inspectors reviewed the exercise's objectives and scenario to ensure that the major elements of the licensee's emergency plan (E-Plan) would be properly tested as required by 10 CFR 40.47(b)(14).

The exercise evaluation focused on the ERO's performance to implement accident mitigation strategies in the following response facilities:

- Control Room Simulator (CRS)
- Technical Support Center (TSC)
- Operations Support Center (OSC)
- Emergency Operations Facility (EOF)
- Emergency News Center (ENC)

The inspectors assessed the ERO's capability to implement the risk-significant activities of emergency classification, notification and protective action decision making. The assessment also included: (1) operator recognition and response to abnormal plant conditions; (2) activation and transfer of responsibilities between facilities; (3) conduct of facility operations and related equipment; (4) internal communications; (5) interfaces with offsite officials; and (6) overall implementation of the licensee's E-Plan and its implementing procedures.

The inspectors attended Exelon's exercise critique on April 28, 2006, to assess the licensee's assessment of the exercise participants' performance for responding to this simulated radiological event. The licensee's critique results were then compared with the NRC's independent observations and assessments to ensure the licensee was capable of identifying exercise deficiencies.

Additionally, the inspectors reviewed Exelon's critique findings as documented in drill and exercise reports from 2004 - 2006. These reviews were conducted to determine if significant performance trends existed and to determine the effectiveness of licensee corrective actions based upon ERO performance observed during this exercise. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 01. 10 CFR 50.47(b)(14) and Appendix E IV.F.2.g were used as reference criteria.

##### b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 - 1 Sample)

a. Inspection Scope (1 Sample)

During the period of September 2005 - April 2006, the NRC received changes made to Exelon's E-Plan in accordance with 10 CFR 50.54(q). Exelon Nuclear determined the changes did not decrease the effectiveness of the E-Plan; and, also that the E-Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. A selected sample of E-Plan changes were reviewed in-office by the inspector. This review does not constitute approval of the changes and, as such, the changes and the associated 10 CFR 50.54(q) reviews are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

40A1 Performance Indicator (PI) Verification (71151- 3 Samples)

a. Inspection Scope

The inspectors reviewed data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) Alert and Notification System (ANS) Reliability. The inspectors reviewed supporting documentation from drills and tests in the third and fourth quarters of 2005 and first quarter of 2006 to verify the accuracy of the reported data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria used for the review were 10 CFR 50.9 and NEI 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guidelines." This inspection activity represents the completion of three samples on an annual cycle.

b. Findings

No findings of significance were identified.

40A6 Meetings, including Exit

On April 28, 2006, the inspectors presented the inspection results to Mr. J. Grimes and other Exelon staff. The inspectors confirmed that no proprietary information was provided or examined during the inspection.

**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

G. Jardel, EP Manager  
D. Striebig, EP Coordinator  
S. Mannix, Corporate Exercise Coordinator

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

Opened and Closed

None

Discussed

None

**LIST OF DOCUMENTS REVIEWED**

**Section 1EP1: Exercise Evaluation**

Exelon Standardized Emergency Plan  
Peach Bottom Annex Emergency Plan  
Emergency Plan Implementing Procedures

Drill and Exercise Reports

Integrated Drill Report (2/9/06)  
Pre-Exercise 2006 Report (3/21/06)  
Focused Area Drill Findings and Observation Report, 3/29/05  
Integrated Drill Findings and Observation Report, 4/29/05  
Integrated Drill Findings and Observation Report, 7/28/05  
Integrated Drill Report, 1/10/06  
Integrated Drill Report, 12/15/05  
Integrated Drill Findings and Observation Report, 8/18/05  
Drill Findings and Observation Report, 6/8/04  
Integrated Drill Findings and Observation Report, 7/15/04  
Biennial Exercise Findings and Observation Report, 7/12/04  
Integrated Drill Findings and Observation Report, 7/29/04  
Drill Findings and Observation Report, 5/18/04  
First Quarter Focused Area Drill Findings and Observation Report, 3/16/04  
Fourth Quarter Focused Area Drill Findings and Observation Report, 11/12/04



Corrective Action Reports

00484186, ERO Offsite Interface  
 00484338, Exercise / Scenario Mgt Issues  
 00484347, Exercise / Scenario Mgt Issues  
 00484070, NOS – All Facilities Improvement Opportunities  
 00484360, NOS - identified enhancements from 4/25/06 EP Exercise  
 00487238, NRC Observations from 4/25/06 EP Graded Exercise  
 00484373, ERO Performance Issues  
 00484388, Exercise / Scenario Mgt Issues  
 00485769, Performance / Facilities & Equipment Issues  
 00483886, Procedure Issues  
 00483891, Program Administration Issues  
 00484185, ERO Training

Section 40A1:Performance Indicator Verification

EP-AA-125-1001, EP PI Guidance  
 EP-AA-125-1002, ERO Performance, PI Guidance  
 EP-AA-125-1003, ERO Readiness, PI Guidance  
 EP-AA-125-1004, Emergency Response Facilities and Equipment PI Guidance

**LIST OF ACRONYMS**

ANS	Alert Notification System
CRS	Control Room Simulator
DEP	Drill and Exercise Performance
ENC	Emergency News Center
EP	Emergency Preparedness
E-Plan	Emergency Plan
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
IMC	Inspection Manual Chapter
IR	Inspection Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
OA	Other Activities
OSC	Operations Support Center
PARS	Publicly Available Records
TSC	Technical Support Center