

July 21, 2004

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

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION NRC EVALUATED
EMERGENCY PREPAREDNESS EXERCISE - INSPECTION REPORT NOS.
05000277/2004007 AND 05000278/2004007

Dear Mr. Crane:

On June 25, 2004, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Peach Bottom Atomic Power Station. The enclosed inspection report documents the inspection findings, which were discussed on June 25, 2004, with Mr. J. Grimes and other members of your staff.

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 selected procedures and records, observed activities, and interviewed personnel.

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

In accordance with 10CFR2.390 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/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

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

Enclosure: Inspection Report No. 05000277/2004007 and 05000278/2004007
w/Attachment: Supplemental Information

cc w/encl:

Chief Operating Officer, Exelon Generation Company, LLC
Site Vice President, Peach Bottom Atomic Power Station
Plant Manager, Peach Bottom Atomic Power Station
Regulatory Assurance Manager - Peach Bottom
Senior Vice President, Nuclear Services
Vice President, Mid-Atlantic Operations
Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director, Licensing and Regulatory Affairs, Exelon Generation Company, LLC
Manager, Licensing - Peach Bottom Atomic Power Station
Vice President, General Counsel and Secretary
Associate General Counsel, Exelon Generation Company
Correspondence Control Desk
Manager License Renewal
D. Quinlan, Manager, Financial Control, PSEG
R. McLean, Power Plant and Environmental Review Division
D. Levin, Acting Secretary of Harford County Council
Mr. & Mrs. Dennis Hiebert, Peach Bottom Alliance
Mr. & Mrs. Kip Adams
D. Allard, Director, Pennsylvania Bureau of Radiation Protection
Director, Nuclear Training
TMI - Alert (TMIA)
Board of Supervisors, Peach Bottom Township
R. Fletcher, Department of Environment, Radiological Health Program
J. Johnsrud, National Energy Committee, Sierra Club
Public Service Commission of Maryland, Engineering Division
J. Bradley Fewell, Assistant General Counsel, Exelon Nuclear
D. Hammons, RAC Chair, FEMA Region III
Commonwealth of Pennsylvania (c/o R. Janati, Chief, Division of Nuclear Safety,
Pennsylvania Bureau of Radiation Protection)
T. Snyder, Director, Air and Radiation Management Administration, Maryland Department of the
Environment (SLO)

Distribution w/encl:

- H. Miller, RA/J. Wiggins, DRA (1)
- M. Shanbaky, DRP
- A. Blamey, DRP
- C. Smith, DRP - NRC Senior Resident Inspector
- D. Schroeder, DRP - NRC Resident Inspector
- C. Miller, RI EDO Coordinator
- J. Clifford, NRR
- G. Wunder, PM, NRR
- S. Wall, PM, NRR (Backup)
- Region I Docket Room (with concurrences)
- R. Kahler, NRR
- D. Barss, NRR
- W. Lanning, DRS
- R. Crlenjak, DRS
- R. Conte, DRS
- D. Silk, DRS

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OFFICE	RI/DRS		RI/DRP		RI/DRS				
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DATE	07/19/04		07/20/04		07/21/04				

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U. S. NUCLEAR REGULATORY COMMISSION REGION I
REGION I

Docket Nos: 50-277 and 50-278

License Nos: DPR-44 and DPR-56

Report Nos: 05000277/2004007 and 05000278/2004007

Licensee: Exelon Nuclear, LLC

Facility: Peach Bottom Atomic Power Station

Location: Delta, PA

Dates: June 22 - 25, 2004

Inspectors: D. Silk, Sr. Emergency Preparedness Inspector,
Division of Reactor Safety (DRS), (Lead)
N. McNamara, Emergency Preparedness Inspector, DRS
J. Laughlin, Operations Engineer, DRS
C. Smith, Sr. Resident Inspector, Peach Bottom,
Division of Reactor Projects (DRP)

Observer: K. Smith, Summer Intern, DRS

Approved by: Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000277/2004-007 and 05000278/2004-007; 06/22-06/25/2004; Peach Bottom Atomic Power Station. Emergency Preparedness Exercise. Protective Action Recommendation.

This inspection was conducted by region-based inspectors and the resident inspector. An unresolved item was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 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 (71114.01)

a. Inspection Scope

This inspection activity represents the completion of one sample on a biennial cycle. Prior to the exercise, an in-office review was conducted of the exercise objectives and scenario submitted to the NRC to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14).

The adequacy of Exelon's performance in the biennial full-participation exercise was reviewed and assessed regarding the implementation of the risk-significant planning standards (RSPS) in 10 CFR 50.47 (b) (4), (5), (9) & (10) which are emergency classification, offsite notification, radiological assessment, and protective action recommendations, respectively. Other performance areas besides the RSPS were evaluated, such as the emergency response organization's (ERO) recognition of abnormal plant conditions and indications, command and control, intra- and inter-facility communications, prioritization of mitigation activities, utilization of repair and field monitoring teams, interface with offsite agencies, and the overall implementation of the emergency plan and its implementing procedures.

The overall adequacy of Exelon's emergency response facilities were compared to NUREG-0696, "Functional Criteria for Emergency Response Facilities" and Emergency Plan commitments. The facilities assessed were the simulator (SCR), Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and the Joint Public Information Center (JPIC).

Past performance issues from NRC inspection reports and Exelon's drill reports were reviewed to determine effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14). Also, the immediate post-exercise facility debriefs and the final critique was observed to evaluate Exelon's self-assessment of its ERO's performance during the exercise and to ensure compliance with 10 CFR 50 Appendix E.IV.F.2.g.

b. Findings

No findings of significance were identified.

Enclosure

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

a. Inspection Scope

As a result of inspection conducted at another licensee's facility which removed sheltering from its range of protective actions, the NRC regional staff reviewed the PAR procedures for all Region I licensees. Exelon sites within Pennsylvania were the only sites which had also removed sheltering from its range of protective actions. This inspection specifically reviewed the change that eliminated sheltering from Peach Bottom PAR options.

b. Findings

NRC requirements state that a range of protection actions are to be utilized by licensees. The Peach Bottom PAR procedure presently does not include sheltering. Prior to December 1992, the licensee had sheltering as an option within its PARs. An evaluation by the licensee resulted in revising the PARs to only consider evacuation. (At that time, the classification tables included both declaration criteria as well as PARs for general emergencies.) The basic reason for the change was to add significant conservatism to the PAR as stated in the excerpt below:

The Emergency Director needs to be able to make a recommendation to the states of Maryland and Pennsylvania that is adequate to protect the public health and safety in the event of a major accidental release of radioactive material to the environment. Although these recommendations are extremely conservative, in an event that is rapidly degrading or an event that has a high potential for radioactive release, it is prudent to make an extremely conservative recommendation. Therefore, this revision replaces all shelter PAR's with evacuation PAR's for the same area and distance.

Additionally, the NRC's Response Technical Manual requires the NRC to recommend evacuation minimally for the 2 mile radius and 5 miles downwind during a General Emergency. For PECO to recommend shelter may be interpreted as non-conservative by the public and off site agencies.

As stated within the licensee's evaluation, NRC's Response Technical Manual does discuss evacuation, however, it also discusses advising the remainder of the plume EPZ to go indoors to monitor emergency broadcasts. NRC guidance in NUREG-0654 FEMA-REP-1, Revision 1, Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents" likewise discusses evacuating a two mile radius and five miles down wind and, non-evacuated areas are directed to go indoors and listen to emergency messages. EPA 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" discusses both evacuation and sheltering. These documents are consistent with 10 CFR 50.47(b)(10) which states in part that "A range of protective action have been developed for the plume exposure pathway EPZ for

emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place...” The removal of sheltering appears to be contrary to Federal guidance and 10 CFR 50.47(b)(10). The licensee apparently misinterpreted NRC guidance documents. The NRC headquarter’s staff is currently reviewing a similar case at Point Beach.

This issue affects the EP cornerstone and could be more than minor because it impacts the attribute of procedure quality which in turn impacts 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. However, this issue is unresolved pending the results of NRC headquarter’s review. **URI 05000277; 05000278/2004007-001, Removal of sheltering from PAR options**

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors reviewed the licensee’s procedure for developing the data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) ANS Reliability. The inspector reviewed documentation from drills in 2003 and 2004 drill and ANS testing results to verify the accuracy of the reported data. Data generated since the June 2003 EP PI verification was reviewed during this inspection. The review of these performance indicators 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.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152: PI&R Sample)

a. Inspection Scope

The inspectors reviewed Exelon’s critique findings as documented in drill reports from 2003 through 2004. This review was conducted to determine if significant performance trends exist and to determine the effectiveness of licensee corrective actions based upon ERO performance during this exercise. The inspectors verified that issues identified during this exercise were entered into Exelon’s corrective action program and the Action Requests (ARs) are listed in an attachment to this report. 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 and Observations

No findings of significance were identified.

40A6 Meetings, Including Exit

The inspectors presented the inspection results to Mr. J. Grimes, Plant Manager, and other members of the licensee's staff at the conclusion of the inspection on June 25, 2004. The licensee had no objections to the NRC observations. No proprietary information was provided to the inspectors during this inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

S. Beck, Peach Bottom Emergency Preparedness Manager
R. Kaminski, Drill and Exercise Coordinator
J. Karkaska, Mid-Atlantic Emergency Preparedness Manager
S. Mannix, Facility and Equipment Coordinator
D. Neff, Drill and Exercise Coordinator
D. Striebig, Emergency Preparedness Coordinator

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000277/2004007001 URI Removal of sheltering from PAR options.
and 05000278/2004007001

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

NUREG-0696, Functional Criteria for Emergency Response Facilities
Peach Bottom Atomic Power Station Annex Emergency Plan
Exelon Nuclear Implementing Procedures

Section 1EP4: Emergency Action Level and Emergency Plan Changes

10 CFR 50.59 Determination Form Peach Bottom Atomic Power Station, Determination for:
Peach Bottom Atomic Power Station Emergency Plan, December 1992 Revision
10 CFR 50.54(q) Evaluation, Peach Bottom Atomic Power Station Emergency Plan Section 4
Table 4.1 Revision Number December/1992

Section 40A2: Identification and Resolution of Problems

Action Requests

AR 00232650 6/22/04 PB EP Exercise, Station Procedure Improvement Items
AR 00232658 6/22/04 PB EP Exercise, Station ERO Performance Improvement Items
AR 00232669 6/22/04 PB EP Exercise Station Facilities and Equipment Improvement Items
AR 00232673 6/22/04 PB EP Exercise, Station ERO Training Improvement Items

AR 00232680 6/22/04 PB EP Exercise, Exercise Management Improvement Items
AR 00233029 6/22/04 PB EP Exercise, EOF/JPIC Facilities and Equipment Improvement Items
AR 00233062 6/22/04 PB EP Exercise, EOF/JPIC ERO Performance Improvement Items
AR 00233072 6/22/04 PB EP Exercise, EOF/JPIC Procedure Improvement Items
AR 00231081 Graded Exercise Missed DEP Opportunity & Associated Demonstration Criteria
AR 00235433 6/22/04 PB EP Exercise, Improvement Items

LIST OF ACRONYMS

ANS	Alert and Notification System
AR	Action Request
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
ERO	Emergency Response Organization
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
JPIC	Joint Public Information Center
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
SCR	Simulator Control Room
TSC	Technical Support Center