



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

March 4, 2011

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Rd
Warrenville, IL 60555

SUBJECT: ANNUAL ASSESSMENT LETTER FOR PEACH BOTTOM ATOMIC POWER STATION (05000277/2010001 and 05000278/2010001)

Dear Mr. Pacilio:

On February 8, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed its end-of-cycle performance review of the Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from January 1, 2010 through December 31, 2010. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. This performance review and enclosed inspection plan do not include security information. A separate letter will include the NRC's assessment of your performance in the Security Cornerstone and its security-related inspection plan.

The NRC determined that overall, Peach Bottom Units 2 and 3 operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined that the performance at Peach Bottom Units 2 and 3 during the most recent quarter was within the Licensee Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because all inspection findings had very low (i.e., green) safety significance, and all PIs indicated that your performance was within the nominal, expected range (i.e., green). Therefore, the NRC plans to conduct ROP baseline inspections at your facility.

As discussed in 2009 and 2010 Assessment Letters (ML100621009¹ and ML102440413), the staff issued a Confirmatory Order (Order) to Exelon Generation Company, LLC (Exelon) on December 1, 2009, which formalized an agreement reached through the NRC's Alternative Dispute Resolution process regarding two acts of deliberate misconduct (ML093350150). The NRC conducted a follow-up inspection during the 4th quarter of 2010 using IP 92702, and the inspectors determined that PBAPS and Exelon have satisfied all of the terms of the Order (ML110341057). As documented in a February 18, 2011, letter to Exelon, the NRC has determined Exelon to be in compliance with the Order and no further action is planned (ML110490436).

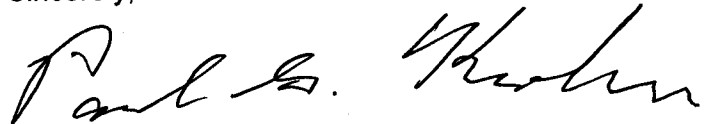
¹ Designation in parentheses refers to an Agencywide Documents Access and Management System (ADAMS) accession number. Documents referenced in this letter are publicly-available using the accession number in ADAMS.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. In addition to the baseline inspection program, we plan to conduct Inspection Procedure 60855, "Operation of an ISFSI." The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact me at (610) 337-5120 with any questions you have regarding this letter.

Sincerely,



Paul G. Krohn, Chief
Division of Reactor Projects
Projects Branch 4

Docket Nos. 50-277, 50-278
License Nos. NPF-44, NPF-56

cc w/encl: Distribution via ListServ
Peach Bottom Inspection/Activity Plan

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. In addition to the baseline inspection program, we plan to conduct Inspection Procedure 60855, "Operation of an ISFSI." The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

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Sincerely,
/RA/
Paul G. Krohn, Chief
Division of Reactor Projects
Projects Branch 4

Docket Nos. 50-277, 50-278
License Nos. NPF-44, NPF-56

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Peach Bottom Inspection/Activity Plan

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Peach Bottom

Inspection / Activity Plan

01/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			01/31EXM - INITIAL OPERATOR LICENSING EXAMS		4
2	01/10/2011	01/14/2011	U01769	FY11 - PEACH BOTTOM UNITS 2&3 INITIAL OPERATOR LICENSING EXAM	
2	01/31/2011	02/11/2011	U01769	FY11 - PEACH BOTTOM UNITS 2&3 INITIAL OPERATOR LICENSING EXAM	
			EP - EP ANNUAL REPORT		4
2,3	01/01/2011	12/31/2011	IP 7111406	Drill Evaluation	
			711111B - PB REQUAL INSP W/P/F RESULTS		2
2,3	03/07/2011	03/11/2011	IP 7111111B	Licensed Operator Requalification Program	
			EP PROGR - EP PROGRAM INSPECTION		1
2,3	02/14/2011	02/18/2011	IP 7111402	Alert and Notification System Testing	
2,3	02/14/2011	02/18/2011	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
2,3	02/14/2011	02/18/2011	IP 7111404	Emergency Action Level and Emergency Plan Changes	
2,3	02/14/2011	02/18/2011	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
2,3	02/14/2011	02/18/2011	IP 71151-EP01	Drill/Exercise Performance	
2,3	02/14/2011	02/18/2011	IP 71151-EP02	ERO Drill Participation	
2,3	02/14/2011	02/18/2011	IP 71151-EP03	Alert & Notification System	
			7111121 - CDBI		7
2,3	02/14/2011	02/18/2011	IP 7111121	Component Design Bases Inspection	
2,3	02/28/2011	03/04/2011	IP 7111121	Component Design Bases Inspection	
2,3	03/07/2011	03/11/2011	IP 7111121	Component Design Bases Inspection	
			TI-179 - TI-179 - NSTS TEMPORARY INSPECTION		1
2,3	04/04/2011	04/08/2011	IP 2515/179	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	
			RADWASTE - RAD WASTE		1
2,3	04/04/2011	04/08/2011	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			60855 - ISFSI CAMPAING LOADING INSPECTION		1
2,3	04/01/2011	06/30/2011	IP 60855	Operation Of An ISFSI	
			HP-71124 - HP- /INSTRUMENTS/REMP/ISFSI		1
2,3	06/06/2011	06/10/2011	IP 60855	Operation Of An ISFSI	
2,3	06/06/2011	06/10/2011	IP 71124.05	Radiation Monitoring Instrumentation	
2,3	06/06/2011	06/10/2011	IP 71124.07	Radiological Environmental Monitoring Program	
			71124 - RADIOACTIVE GASEOUS AND LIQUID EFFLUENT		1
2,3	06/06/2011	06/10/2011	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
			71152B - PI&R		4
2,3	07/25/2011	07/29/2011	IP 71152B	Identification and Resolution of Problems	
2,3	08/08/2011	08/12/2011	IP 71152B	Identification and Resolution of Problems	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Peach Bottom

Inspection / Activity Plan

01/01/2011 - 06/30/2012

Unit Number	Planned Dates Start End	Inspection Activity	Title	No. of Staff on Site
MC 2561 - SAFSTOR INSPECTION				1
1	08/15/2011 08/19/2011	IP 36801	Organization, Management, And Cost Controls At Permanently Shutdown Reactors	
1	08/15/2011 08/19/2011	IP 37801	Safety Reviews, Design Changes, And Modifications At Permanently Shutdown Reactors	
1	08/15/2011 08/19/2011	IP 40801	Self-Assessment, Auditing, And Corrective Action At Permanently Shutdown Reactors	
1	08/15/2011 08/19/2011	IP 62801	Maintenance And Surveillance At Permanently Shutdown Reactors	
1	08/15/2011 08/19/2011	IP 71801	Decommissioning Performance And Status Review At Permanently Shutdown Reactors	
1	08/15/2011 08/19/2011	IP 83750	Occupational Radiation Exposure	
1	08/15/2011 08/19/2011	IP 84750	Radioactive Waste Treatment, And Effluent And Environmental Monitoring	
1	08/15/2011 08/19/2011	IP 86750	Solid Radioactive Waste Management And Transportation Of Radioactive Materials	
HP-71124 - HP-ALARA/AIR/DOSE/INSTRUMENTS/ACCESS				1
2,3	08/22/2011 08/26/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
2,3	08/22/2011 08/26/2011	IP 71124.02	Occupational ALARA Planning and Controls	
2,3	08/22/2011 08/26/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
2,3	08/22/2011 08/26/2011	IP 71124.04	Occupational Dose Assessment	
2,3	08/22/2011 08/26/2011	IP 71124.05	Radiation Monitoring Instrumentation	
HP-71124 - ACCESS/ALARA/AIR/DOSE/INSTRUMENTS				1
2,3	09/19/2011 09/23/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
2,3	09/19/2011 09/23/2011	IP 71124.02	Occupational ALARA Planning and Controls	
2,3	09/19/2011 09/23/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
2,3	09/19/2011 09/23/2011	IP 71124.04	Occupational Dose Assessment	
2,3	09/19/2011 09/23/2011	IP 71124.05	Radiation Monitoring Instrumentation	
7111108G - U3 INSERVICE INSPECTION				1
3	09/19/2011 09/23/2011	IP 7111108G	Inservice Inspection Activities - BWR	
HP-71124 - ACCESS/ALARA/DOSE/PI				1
2,3	11/14/2011 11/18/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
2,3	11/14/2011 11/18/2011	IP 71124.02	Occupational ALARA Planning and Controls	
2,3	11/14/2011 11/18/2011	IP 71124.04	Occupational Dose Assessment	
3	11/14/2011 11/18/2011	IP 71151-OR01	Occupational Exposure Control Effectiveness	
2	11/14/2011 11/18/2011	IP 71151-PR01	RETS/ODCM Radiological Effluent	
EP EX - EP EXERCISE EVALUATION				5
2,3	03/26/2012 03/30/2012	IP 7111401	Exercise Evaluation	
2,3	03/26/2012 03/30/2012	IP 7111404	Emergency Action Level and Emergency Plan Changes	
71124 - RADIOLOGICAL HAZARD AND EXPOSURE CONTROL				1
2,3	04/09/2012 04/13/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	

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Peach Bottom
Inspection / Activity Plan
01/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			71124 - OCCUPATIONAL ALARA		1
2,3	04/09/2012	04/13/2012	IP 71124.02	Occupational ALARA Planning and Controls	
			71124 - AIRBORNE RADIOACTIVITY		1
2,3	04/09/2012	04/13/2012	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
			71124 - OCCUPATIONAL DOSE ASSESSMENT		1
2,3	04/09/2012	04/13/2012	IP 71124.04	Occupational Dose Assessment	
			TRI FI - TRIENNIAL FIRE PROTECTION INSPECTION		3
2,3	04/30/2012	05/04/2012	IP 7111105T	Fire Protection [Triennial]	
2,3	05/14/2012	05/18/2012	IP 7111105T	Fire Protection [Triennial]	
			71124 - RAD HAZ ASSESS EXPOSURE CONTROLS		1
2,3	06/04/2012	06/08/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			71124 - OCCUPATIONAL ALARA		1
2,3	06/04/2012	06/08/2012	IP 71124.02	Occupational ALARA Planning and Controls	
			71124 - OCCUPATIONAL DOSE ASSESSMENT		1
2,3	06/04/2012	06/08/2012	IP 71124.04	Occupational Dose Assessment	
			71124 - RADIATION MONITORING INSTRUMENTATION		1
2,3	06/04/2012	06/08/2012	IP 71124.05	Radiation Monitoring Instrumentation	

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