



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

March 2, 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: ANNUAL ASSESSMENT LETTER - PEACH BOTTOM ATOMIC POWER
STATION (REPORT 05000277/2006001 AND 05000278/2006001)

Dear Mr. Crane:

On February 6, 2006, the NRC staff completed its performance review of Peach Bottom Atomic Power Station. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2005. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include physical protection information. A separate letter designated and marked "Official Use Only - Security-Related Information" will include the physical protection review and resultant inspection plan.

Overall, Peach Bottom Units 2 and 3 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter was within the Licensee Response column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility.

While plant performance at Unit 2 for the most recent quarter is within the Licensee Response column of the Action Matrix, there was a safety significant (White) performance indicator in the Initiating Events cornerstone which affected the first three quarters of the assessment cycle. Peach Bottom Unit 2 had three scrams with a Loss of Normal Heat Removal within twelve calendar quarters causing this PI to change from Green to White, which placed this unit in the Regulatory Response column. You performed root cause evaluations and corrective actions for each of the events, and we conducted an NRC Supplemental Inspection in December 2005, which concluded that your actions were appropriate.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through September 30, 2007. Planned inspections include an independent spent fuel storage installation inspection. The inspection plan is provided to allow for the resolution of

any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 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 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).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact James Trapp at 610-337-5186 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Brian E. Holian, Director
Division of Reactor Projects, Region I

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

Enclosure: Peach Bottom Inspection/ Activity Plan

cc w/encl:

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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)
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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

C. Crane

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SISP Review Complete: JMT (Reviewer's Initials)

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OFFICE	RI/DRP	RI/DRP	RI/DRP
NAME	FBower/JMT for	ABurritt/JMT for	JTrapp/JMT
DATE	02/22/06	02/22/06	02/22/06

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Peach Bottom 3
Inspection / Activity Plan
03/01/2006 - 09/30/2007

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	7111401	- EXERCISE EVALUATION & EP PI VERIFICATION	5			
3	IP 7111401	Exercise Evaluation		04/24/2006	04/28/2006	Baseline Inspections
3	IP 7111404	Emergency Action Level and Emergency Plan Changes		04/24/2006	04/28/2006	Baseline Inspections
3	IP 71151	Performance Indicator Verification		04/24/2006	04/28/2006	Baseline Inspections
	7111111B	- LSRO REQUAL AN OPTEST @ LM	3			
3	IP 7111111B	Licensed Operator Requalification Program		05/29/2006	06/02/2006	Baseline Inspections
	7111121	- CDBI (COMPONENT DESIGN BASES INSPECTION)	7			
3	IP 7111121	Component Design Bases Inspection		03/27/2006	03/31/2006	Baseline Inspections
3	IP 7111121	Component Design Bases Inspection		03/27/2006	03/31/2006	Baseline Inspections
3	IP 7111121	Component Design Bases Inspection		04/10/2006	04/14/2006	Baseline Inspections
3	IP 7111121	Component Design Bases Inspection		04/17/2006	04/21/2006	Baseline Inspections
	71121	- OCCUPATIONAL RAD PROT	1			
3	IP 7112101	Access Control to Radiologically Significant Areas		04/17/2006	04/21/2006	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		04/17/2006	04/21/2006	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		04/17/2006	04/21/2006	Baseline Inspections
	ISFSI	- ISFSI	2			
3	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants		05/01/2006	07/15/2006	Other Routine
	7111112B	- MAINTENANCE RULE	1			
3	IP 7111112B	Maintenance Effectiveness		07/17/2006	07/21/2006	Baseline Inspections
	7111107B	- HEAT SINK	2			
3	IP 7111107B	Heat Sink Performance		07/24/2006	07/28/2006	Baseline Inspections
	71121	- OCC RAD SAF	1			
3	IP 7112101	Access Control to Radiologically Significant Areas		08/07/2006	08/11/2006	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		08/07/2006	08/11/2006	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		08/07/2006	08/11/2006	Baseline Inspections
	71121	- OCC RAD PROT	1			
3	IP 7112101	Access Control to Radiologically Significant Areas		09/25/2006	09/29/2006	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		09/25/2006	09/29/2006	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		09/25/2006	09/29/2006	Baseline Inspections
	71121	- OCC RAD PROT	1			
3	IP 7112101	Access Control to Radiologically Significant Areas		11/13/2006	11/17/2006	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		11/13/2006	11/17/2006	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		11/13/2006	11/17/2006	Baseline Inspections
3	IP 71151	Performance Indicator Verification		11/13/2006	11/17/2006	Baseline Inspections

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

Peach Bottom 3
Inspection / Activity Plan
03/01/2006 - 09/30/2007

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	7111111B - L.O.(PWR.) REQUAL. PROG. + P/F REVIEW		3			
3	IP 7111111B	Licensed Operator Requalification Program		02/26/2007	03/02/2007	Baseline Inspections
3	IP 7111111B	Licensed Operator Requalification Program		03/05/2007	03/09/2007	Baseline Inspections
	71111117 - MODS AND 50.59		3			
3	IP 7111102	Evaluation of Changes, Tests, or Experiments		03/05/2007	03/09/2007	Baseline Inspections
3	IP 7111117B	Permanent Plant Modifications		03/05/2007	03/09/2007	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
3	IP 7112101	Access Control to Radiologically Significant Areas		04/09/2007	04/13/2007	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		04/09/2007	04/13/2007	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		04/09/2007	04/13/2007	Baseline Inspections
	71152B - PI&R		4			
3	IP 71152B	Identification and Resolution of Problems		04/23/2007	04/27/2007	Baseline Inspections
3	IP 71152B	Identification and Resolution of Problems		05/14/2007	05/18/2007	Baseline Inspections
	71122 - PUBLIC RAD PROT - RETS		1			
3	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		06/04/2007	06/08/2007	Baseline Inspections
	7112202 - PUB RAD SAFETY - RADWASTE		1			
3	IP 7112202	Radioactive Material Processing and Transportation		06/18/2007	06/22/2007	Baseline Inspections
	71114 - EP PRGM INSP		1			
3	IP 7111402	Alert and Notification System Testing		07/23/2007	07/27/2007	Baseline Inspections
3	IP 7111403	Emergency Response Organization Augmentation Testing		07/23/2007	07/27/2007	Baseline Inspections
3	IP 7111404	Emergency Action Level and Emergency Plan Changes		07/23/2007	07/27/2007	Baseline Inspections
3	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		07/23/2007	07/27/2007	Baseline Inspections
3	IP 71151-EP01	Drill/Exercise Performance		07/23/2007	07/27/2007	Baseline Inspections
3	IP 71151-EP02	ERO Drill Participation		07/23/2007	07/27/2007	Baseline Inspections
3	IP 71151-EP03	Alert & Notification System		07/23/2007	07/27/2007	Baseline Inspections
	7112203 - PUB RAD SAFETY - REMP		1			
3	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		07/30/2007	08/03/2007	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
3	IP 7112101	Access Control to Radiologically Significant Areas		09/10/2007	09/14/2007	Baseline Inspections
3	IP 7112102	ALARA Planning and Controls		09/10/2007	09/14/2007	Baseline Inspections
3	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		09/10/2007	09/14/2007	Baseline Inspections