



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

March 14, 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: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - NRC  
EXAMINATION REPORT 05000277/2011301; 05000278/2011301

Dear Mr. Pacilio:

On February 10, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Peach Bottom Atomic Power Station, Units 2 and 3. The enclosed report documents the examination findings, which were discussed on February 28, 2011, with Mr. Bruce Hennigan of your training staff.

The examination included the evaluation of six applicants for reactor operator licenses, six applicants for instant senior operator licenses and three applicants for upgrade senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The license examiners determined that all 15 of the applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses were issued on February 28, 2011.

No findings were identified during this examination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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,

Samuel L. Hansell, Jr., Chief  
Operations Branch  
Division of Reactor Safety

Enclosure: NRC Examination Report 05000277/2011301; 05000278/2011301

cc w/encl: Distribution via ListServ  
A. Wasong, Director of Training

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 Senior Vice President, Exelon Generation Company, LLC  
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 /RA/

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 A. Wasong, Director of Training

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**EXAMINATION REPORT**

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

Dockets: 50-277, 50-278  
Licenses: DPR-44, DPR-56  
Report : 05000277/2011301; 05000278/2011301  
Licensee: Exelon Generation Company, LLC  
Facility: Peach Bottom Atomic Power Station, Units 2 and 3  
Location: Delta, PA  
Dates: January 31 - February 10, 2011 (exam administration)  
February 28, 2011 (completion of exam grading, exit date)  
Inspectors: Joseph M. D'Antonio, Chief Examiner, Operations Branch  
David Molteni, Operations Engineer  
Joyce Tomlinson, Operations Engineer  
Tom Hedigan, Operations Engineer  
Approved By: Samuel L. Hansell, Jr., Chief  
Operations Branch  
Division of Reactor Safety

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## SUMMARY OF FINDINGS

ER 05000277/2011301; 05000278/2011301; January 31 – February 10, 2011; Peach Bottom Atomic Power Plant, Units 2 and 3; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of six applicants for reactor operator licenses, six applicants for instant senior operator licenses and three applicants for upgrade senior operator licenses at Peach Bottom Atomic Power Plant, Units 2 and 3. The facility licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The written examination was administered by the facility on February 10, 2011. NRC examiners administered the operating tests on January 31 - February 4, 2011. The license examiners determined that all of the 15 applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA5 Other Activities (Initial Operator License Examination)

##### .1 License Applications

###### a. Scope

The examiners reviewed all fifteen license applications submitted by the licensee to ensure the applications reflected that each applicant satisfied relevant license eligibility requirements. The applications were submitted on NRC Form 398, "Personal Qualification Statement," and NRC Form 396, "Certification of Medical Examination by Facility Licensee." The examiners also audited five of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

###### b. Findings

No findings were identified.

##### .2 Operator Knowledge and Performance

###### a. Examination Scope

On February 10, 2011, the licensee proctored the administration of the written examinations to all fifteen applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on February 18, 2011.

The NRC examination team administered the various portions of the operating examination to all fifteen applicants on January 31 - February 4, 2011. The six applicants for reactor operator licenses participated in two dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four administrative tasks. The six applicants seeking an instant senior operator license participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of ten system tasks, and an administrative test consisting of five administrative tasks. The three applicants for upgrade senior operator licenses participated in two dynamic simulator scenarios, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five administrative tasks.

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b. Findings

All 15 of the applicants passed all parts of the operating test. For the written examinations, the reactor operator applicants' average score was 93.10 percent and ranged from 90.66 to 97.33 percent, the senior operator applicants' average score was 90.22 percent and ranged from 84 to 97 percent. The overall written examination average was 91.37 percent. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comments may be accessed in the ADAMS system under the accession numbers noted in the attachment. In accordance with current NRC policy the release of this written examination will be delayed for two years.

Chapter ES-403 and Form ES-403-1 of NUREG 1021 require the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. The licensee conducted this performance analysis for all questions that met these criteria and submitted the analysis to the chief examiner. No changes were recommended by the licensee.

3. Initial Licensing Examination Development

a. Examination Scope

The facility licensee developed the examinations in accordance with NUREG-1021, Revision 9, Supplement 1. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement. The facility licensee submitted both the written and operating examination outlines on September 1, 2010. The chief examiner reviewed the outlines against the requirements of NUREG-1021, Revision 9, Supplement 1, and provided comments to the licensee. The facility licensee submitted the draft examination package on December 6, 2010. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021, Revision 9, Supplement 1, and provided comments to the licensee on the examination during the week of December 13, 2010. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of January 10, 2011. The licensee satisfactorily completed comment resolution prior to exam administration.

b. Findings

The NRC approved the initial examination outline and advised the licensee to proceed with the operating examination development.

The examiners determined that the written and operating examinations initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

No findings were identified.

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.4 Simulation Facility Performance

a. Examination Scope

The examiners observed simulator performance with regard to plant fidelity during the examination validation and administration.

b. Findings

No findings were identified.

.5 Examination Security

a. Examination Scope

The examiners reviewed examination security for examination development and during both the onsite preparation week and examination administration week for compliance with NUREG-1021 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

The chief examiner presented comments concerning the conduct of the examination to Mr. Fred Bruns, the exam author, and other members of your staff during an outbrief meeting on February 4, 2011. The final examination results and license numbers were presented to Mr. Bruce Hennigan, Operations Training Manager, in a telephone exit on February 28, 2011. The licensee acknowledged the findings presented.

The licensee did not identify any information or materials used during the examination as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

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**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

A. Wasong, Training Director  
B. Hennigan, Operations Training Manager  
F. Bruns, Operations Training Program Specialist  
J. Verbellis, Senior Operations Training Instructor

NRC Personnel

J. D'Antonio, Senior Operations Engineer

**ITEMS OPENED, CLOSED, AND DISCUSSED**

NONE

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML110630034 – FINAL-Written Exam (Note: This document will not be released for two years.)

Accession No. ML110630120 – FINAL-Operating Exam