

September 14, 2007

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE
OF AMENDMENT RE: CONTROL ROD SCRAM TIME TESTING FREQUENCY
(TAC NOS. MD3030 AND MD3031)

Dear Mr. Crane:

The Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendments Nos. 262 and 66 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station, Units 2 and 3. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 15, 2006.

These amendments modify the TS Surveillance Requirement 3.1.4.2, "Control Rod Scram Times." Specifically, the proposed change revises the frequency for performing control rod scram time testing from 120 days to 200 days. These changes were based on TS Task Force Change Traveler No. 460, Revision 0, which has been approved generically for the Boiling Water Reactor Standard TS, NUREG-1433 (BWR/4). A notice of availability for the model TS change using the consolidated line item improvement process was published in the *Federal Register* on August 23, 2004 (69 FR 51864).

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Biweekly *Federal Register* Notice.

Sincerely,

/ra/ (Ed Miller for)

John Hughey, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosures:

1. Amendment No. 262 to Renewed DPR-44
2. Amendment No. 266 to Renewed DPR-56
3. Safety Evaluation

cc w/encls: See next page

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Peach Bottom Atomic Power Station, Unit Nos. 2 and 3

cc:

Site Vice President
Peach Bottom Atomic Power Station
Exelon Generation Company, LLC
1848 Lay Road
Delta, PA 17314

Plant Manager
Peach Bottom Atomic Power Station
Exelon Generation Company, LLC
1848 Lay Road
Delta, PA 17314

Regulatory Assurance Manager
Peach Bottom Atomic Power Station
Exelon Generation Company, LLC
1848 Lay Road
Delta, PA 17314

Resident Inspector
U.S. Nuclear Regulatory Commission
Peach Bottom Atomic Power Station
P.O. Box 399
Delta, PA 17314

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Roland Fletcher
Department of Environment
Radiological Health Program
2400 Broening Highway
Baltimore, MD 21224

Correspondence Control Desk
Exelon Generation Company, LLC
P. O. Box 160
Kennett Square, PA 19348

Director, Bureau of Radiation Protection
Pennsylvania Department of
Environmental Protection
Rachel Carson State Office Building
P.O. Box 8469
Harrisburg, PA 17105-8469

Board of Supervisors
Peach Bottom Township
545 Broad Street Ext.
Delta, PA 17314-9203

Mr. Richard McLean
Power Plant and Environmental
Review Division
Department of Natural Resources
B-3, Tawes State Office Building
Annapolis, MD 21401

Dr. Judith Johnsrud
National Energy Committee
Sierra Club
433 Orlando Avenue
State College, PA 16803

Manager-Financial Control & Co-Owner
Affairs
Public Service Electric and Gas Company
P.O. Box 236
Hancocks Bridge, NJ 08038-0236

Manager Licensing-Peach Bottom
Atomic Power Station
Exelon Generation Company, LLC
200 Exelon Way, KSA -3E
Kennett Square, PA 19348

Vice President - Licensing and Regulatory
Affairs
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Vice President-Operations Mid-Atlantic
Exelon Generation Company, LLC
200 Exelon Way, KSA 3-N
Kennett Square, PA 19348

Associate General Counsel
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Peach Bottom Atomic Power Station, Unit Nos. 2 and 3

cc:

Director-Licensing and Regulatory Affairs
Exelon Generation Company, LLC
200 Exelon Way, KSA 3-E
Kennett Square, PA 19348

Mr. Christopher M. Crane
President & Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR LLC

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 262
Renewed License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), and PSEG Nuclear LLC (the licensees), dated September 15, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Renewed Facility Operating License No. DPR-44 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 262, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days. Implementation of the amendment shall include updating the UFSAR in accordance with 10 CFR 50.71(e). This update shall include the effects of all safety analyses and evaluations performed by the licensee in support of the amendment. Specifically, this update shall include, but not be limited to: a statement that the acceptance criterion value for control rods failing to insert within the time established by TS Table 3.1.4-1 is revised to 7.5 percent of the total rods tested during that surveillance.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: September 14, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 262

RENEWED FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

Insert

Page 3

Page 3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

3.1-13

3.1-13

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR LLC

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 266
Renewed License No. DPR-56

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), and PSEG Nuclear LLC (the licensees), dated September 15, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Renewed Facility Operating License No. DPR-56 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 266, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days. Implementation of the amendment shall include updating the UFSAR in accordance with 10 CFR 50.71(e). This update shall include the effects of all safety analyses and evaluations performed by the licensee in support of the amendment. Specifically, this update shall include, but not be limited to: a statement that the acceptance criterion value for control rods failing to insert within the time established by TS Table 3.1.4-1 is revised to 7.5 percent of the total rods tested during that surveillance.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: September 14, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 266

RENEWED FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

Insert

Page 3

Page 3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

3.1-13

3.1-13

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 262 TO RENEWED FACILITY OPERATING
LICENSE NO. DPR-44 AND AMENDMENT NO. 266 TO RENEWED FACILITY OPERATING
LICENSE NO. DPR-56
EXELON GENERATION COMPANY, LLC
PSEG NUCLEAR LLC
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-277 AND 50-278

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated September 15, 2006, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML062630257), Exelon Generation Company, LLC (the licensee), requested changes to the Technical Specifications (TSs) for Peach Bottom Atomic Power Station, Units 2 and 3 (PBAPS, Units 2 and 3). The NRC staff's original proposed no significant hazards consideration determination was published in the *Federal Register* on December 19, 2006 (71 FR 75994).

These amendments would modify the TS Surveillance Requirement (SR) 3.1.4.2, "Control Rod Scram Times." Specifically, the proposed change would revise the frequency for performing control rod insertion (scram time testing from 120 days to 200 days). These changes are based on TS Task Force Change Traveler No. 460, Revision 0, which has been approved generically for the Boiling Water Reactor (BWR) Standard TS, NUREG-1433 (BWR/4). A notice of availability for the model TS change using the consolidated line item improvement process was published in the *Federal Register* on August 23, 2004 (69 FR 51864).

2.0 REGULATORY EVALUATION

The TS requirement governing the control rod scram time surveillance is intended to assure proper functioning of the control rods. Following each refueling outage, all control rod scram times are verified. Control rod scram times are also verified periodically during power operation in representative samples. Currently, the licensee defines a representative as a sample containing at least 10 percent of the total number of control rods. The current TS Bases stipulates that no more than 20 percent of the control rods in this representative sample can be "slow" during the post outage testing. With more than 20 percent of this sample declared to be "slow" per the criteria in Table 3.1.4-1, additional control rods are tested until the number of identified "slow" rods is below 20 percent of the sample size, or until the total number of "slow"

rods (throughout the core, from all surveillances) exceeds the limiting condition for operation limit.

3.0 TECHNICAL EVALUATION

3.1 Description of Proposed Changes

The licensee proposed to revise, for PBAPS, Units 2 and 3, the required frequency of SR 3.1.4.2 from:

120 Days cumulative operation in MODE 1

to:

200 Days cumulative operation in MODE 1

3.2 Evaluation of Proposed Changes

The historical control rod scram time test results at PBAPS, Units 2 and 3 have shown the control rod scram rates to be highly reliable. In its September 15, 2006, submittal, the licensee stated that it had performed a review of the control rod drive system scram time test results for PBAPS, Units 2 and 3 and determined the following:

For PBAPS, Unit 2, from January 2000 to January 2006, (approximately six years), PBAPS conducted a total of 2842 individual control rod scram time tests. Out of those tests only fourteen (14) control rods were identified as 'slow.'

For PBAPS, Unit 3, from January 2000 to January 2006, (approximately six years), PBAPS conducted a total of 1428 individual control rod scram time tests. Out of those tests only four (4) control rods were identified as 'slow.'

Operating experiences from multiple BWRs identified performance issues with the Buna-N diaphragm material originally installed in the Automatic Switch Co. scram solenoid pilot valves (SSPVs). Based on a General Electric (GE) Services Information Letter 584, PBAPS instituted a program to replace Buna-N diaphragms with Viton-A diaphragms. Shortly afterwards, the industry identified Viton-A diaphragm performance issues that delayed SSPV actuation. At the recommendation of GE, PBAPS subsequently established a program to replace all remaining Buna-N and Viton-A diaphragms with Viton-515AB diaphragms. The Viton-515AB formulation has been demonstrated to be resistant to both the hardening and adhesion issues associated with the Buna-N and Viton-A diaphragm materials. All Buna-N diaphragms have been replaced with Viton-515AB material on both PBAPS units. PBAPS is in the process of replacing all Viton-A diaphragms with Viton-515AB diaphragms during hydraulic control unit corrective and scheduled preventative maintenance activities.

The NRC staff reviewed the licensee's review of the operating experience, both industry wide and site specific. The NRC staff finds that the reported failure rates for the PBAPS, Units 2 and 3 of 0.5 percent and 0.3 percent, respectively, to be low and indicative of a reliable system. Additionally, the licensee is adequately addressing the industry experience associated with Buna-N and Viton-A diaphragm material. Therefore, the NRC staff finds that the review of the

historical database presented by the licensee substantiates the claim of high reliability of the PBAPS Units 2 and 3 control rod drive systems.

Based on the historic reliability of the control rod drive system, the NRC staff finds that the proposed change in frequency of 120 days to 200 days for performing the SR 3.1.4.2 to be acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendments. The State official provided no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the type, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (71 FR 75994; December 19, 2006). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Wertz, NRR
G. Miller, NRR

Date: September 14, 2007