UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 1, 2016

Mr. Bryan C. Hanson
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE OF AMENDMENTS RE: SECONDARY CONTAINMENT ACCESS OPENINGS (CAC NOS. MF5783 AND MF5784)

Dear Mr. Hanson:

The Commission has issued the enclosed Amendments Nos. 303 and 307 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for the 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 February 23, 2015, as supplemented by letters dated August 12, 2015, and October 20, 2015.

The amendments modify the TSs to allow for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions.

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

Sincerely,

Richard B. Ennis, Senior 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. 303 to Renewed DPR-44
2. Amendment No. 307 to Renewed DPR-56
3. Safety Evaluation

cc w/enclosures: Distribution via Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 303
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 February 23, 2015, as supplemented by letters dated August 12, 2015, and October 20, 2015, 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. 303, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

/Doug A. Broaddus/

Douglas A. Broaddus, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating License

Date of Issuance: February 1, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 303

RENEWED FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3	3

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3.6-35	3.6-35

(5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

(1) Maximum Power Level

Exelon Generation Company is authorized to operate the Peach Bottom Atomic Power Station, Unit 2, at steady state reactor core power levels not in excess of 3951 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 303, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans[1], submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 281 and modified by Amendment No. 301.

(4) Fire Protection

The Exelon Generation Company shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility, and as approved in the NRC Safety Evaluation Report (SER) dated May 23, 1979, and Supplements dated August 14, September 15, October 10 and November 24, 1980, and in the NRC SERs dated September 16, 1993, and August 24, 1994, subject to the following provision:

[1] The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry or exit.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.3	Verify secondary containment can be drawn down to ≥ 0.25 inch of vacuum water gauge in ≤ 180 seconds using one standby gas treatment (SGT) subsystem.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.4	Verify the secondary containment can be maintained ≥ 0.25 inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 10,500 cfm.	In accordance with the Surveillance Frequency Control Program.

UNITED STATES
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WASHINGTON, D.C. 20555-0001

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. 307
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 February 23, 2015, as supplemented by letters dated August 12, 2015, and October 20, 2015, 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. 307, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Douglas A. Broaddus, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating License

Date of Issuance: February 1, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 307

RENEWED FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3	3

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3.6-35	3.6-35

(5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

(1) Maximum Power Level

Exelon Generation Company is authorized to operate the Peach Bottom Atomic Power Station, Unit No. 3, at steady state reactor core power levels not in excess of 3951 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 307, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans[1], submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 283 and modified by Amendment No. 304.

[1]-The Training and Qualification Plan and Safeguards Contingency Plan and Appendices to the Security Plan.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry or exit.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.3	Verify secondary containment can be drawn down to ≥ 0.25 inch of vacuum water gauge in ≤ 180 seconds using one standby gas treatment (SGT) subsystem.	In accordance with the Surveillance Frequency Control Program.
SR 3.6.4.1.4	Verify the secondary containment can be maintained ≥ 0.25 inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 10,500 cfm.	In accordance with the Surveillance Frequency Control Program.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 303 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-44 AND

AMENDMENT NO. 307 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 application dated February 23, 2015, as supplemented by letters dated August 12, 2015, and October 20, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML15055A506, ML15224B572, and ML15293A406, respectively), Exelon Generation Company, LLC (Exelon, the licensee), submitted a license amendment request (LAR) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The proposed amendment would revise Technical Specification (TS) Surveillance Requirement (SR) 3.6.4.1.2 to allow for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions.

The supplements dated August 12, 2015, and October 20, 2015, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC or the Commission) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on April 14, 2015 (80 FR 20023).

2.0 REGULATORY EVALUATION

The regulatory requirements and guidance that the NRC staff considered in its review of this LAR are described below.

General Design Criteria

The construction permit for PBAPS, Units 2 and 3, was issued by the Atomic Energy Commission (AEC) on January 31, 1968. As discussed in Appendix H to the PBAPS Updated Final Safety Analysis Report (UFSAR), during the construction/licensing process, both units were evaluated against the then-current AEC draft of the 27 General Design Criteria (GDC) issued in November 1965. On July 11, 1967, the AEC published, for public comment in the *Federal Register* (32 FR 10213), a revised and expanded set of 70 draft GDC (hereinafter referred to as the "draft GDC"). Appendix H of the PBAPS UFSAR contains an evaluation of the design basis of PBAPS, Units 2 and 3, against the draft GDC. The licensee concluded that PBAPS, Units 2 and 3, conform to the intent of the draft GDC.

On February 20, 1971, the AEC published in the *Federal Register* (36 FR 3255) a final rule that added Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "General Design Criteria for Nuclear Power Plants" (hereinafter referred to as the "final GDC"). Differences between the draft GDC and final GDC include a consolidation from 70 to 64 criteria. As discussed in the NRC's Staff Requirements Memorandum for SECY-92-223, dated September 18, 1992 (ADAMS Accession No. ML003763736), the Commission decided not to apply the final GDC to plants with construction permits issued prior to May 21, 1971. At the time of promulgation of Appendix A to 10 CFR Part 50, the Commission stressed that the final GDC were not new requirements and were promulgated to more clearly articulate the licensing requirements and practice in effect at that time. Each plant licensed before the final GDC were formally adopted was evaluated on a plant-specific basis determined to be safe and licensed by the Commission.

The licensee has made changes to the facility over the life of the plant that may have invoked the final GDC. The extent to which the final GDC have been invoked can be found in specific sections of the UFSAR and in other plant-specific design and licensing basis documentation.

The NRC staff identified that the following GDCs are applicable to this LAR:

- Draft GDC 10, "Containment (Category A)," which requires, in part, that the containment structure be designed to sustain the initial effects of gross equipment failures, such as a large coolant boundary break, without loss of required integrity and, together with other engineered safety features as may be necessary, to retain functional capability for as long as the situation requires.

- Final GDC 19, "Control room," which requires, in part, that adequate radiation protection be provided to permit access and occupancy of the control room under accident conditions, without personnel receiving radiation exposures in excess of 5 roentgen equivalent man (rem) whole body, or its equivalent to any part of the body, for the duration of the accident.

Technical Specification Requirements

In 10 CFR 50.36, "Technical specifications," the NRC established its regulatory requirements related to the content of TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) SRs; (4) design features; and

(5) administrative controls. The regulation does not specify the particular requirements to be included in a plant's TSs.

As discussed in 10 CFR 50.36(c)(2), LCOs are the lowest functional capability or performance level of equipment required for safe operation of the facility. When LCOs are not met, the licensee shall shut-down the reactor or follow any remedial action permitted by the TSs until the LCO can be met.

As discussed in 10 CFR 50.36(c)(3), SRs are requirements relating to test, calibration, or inspection, to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

Other Regulatory Requirements

The NRC staff identified the following regulatory requirement as being applicable to the LAR:

- 10 CFR 50.67, "Accident source term," which, in part, sets limits for the radiological consequences of a postulated design-basis accident (DBA) using an alternative source term (AST). The NRC approved a full scope implementation of an AST methodology for PBAPS, Units 2 and 3, by License Amendment Nos. 269 and 273 on September 5, 2008 (ADAMS Accession No. ML082320406).

Guidance Documents

The guidance that the NRC staff considered in its review of this LAR included the following:

- Regulatory Guide (RG) 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," dated July 2000 (ADAMS Accession No. ML003716792). This RG provides guidance for analyzing the radiological consequences of several DBAs to show compliance with 10 CFR 50.67.

- NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (hereinafter referred to as "SRP"). Relevant sections of the SRP used in review of this LAR include the following:

  - SRP Section 15.0.1, "Radiological Consequence Analyses Using Alternative Source Terms," Revision 0, dated July 2000 (ADAMS Accession No. ML003734190). This SRP section states that the reviewer should evaluate the proposed change against the guidance in RG 1.183.

  - SRP Section 16.0, "Technical Specifications," Revision 3, dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared Standard Technical Specifications (STS) for each of the light-water reactor nuclear designs. The STS contain guidance for the format and content of TSs that meet the requirements of 10 CFR 50.36. For this review, the NRC staff used NUREG-1433, Revision 4, "Standard Technical Specifications - General Electric BWR/4 Plants" (ADAMS Accession Nos. ML12104A192 and ML12104A193), and NUREG-1434, Revision 4, "Standard Technical Specifications -

General Electric BWR/6 Plants" (ADAMS Accession Nos. ML12104A195 and ML12104A196) for guidance on the TS format.

- NUREG-1022, Revision 3, "Event Report Guidelines 10 CFR 50.72 and 50.73," dated January 2013 (ADAMS Accession No. ML13032A220), discusses the reporting criteria contained in the 10 CFR 50.72 and 10 CFR 50.73. Section 3.2.7 of NUREG-1022 discusses the reporting criteria in 10 CFR 50.72(b)(3)(v) and 10 CFR 50.73(a)(2)(v), which relate to events or conditions that could have prevented fulfillment of a safety function. This section states, in part, that there are a limited number of single-train systems that perform safety functions. For such systems, inoperability of the single train is reportable, even though the plant TSs may allow such a condition to exist for a limited time. This issue, as it relates to reportability for momentary inoperability of secondary containment, is discussed in an NRC letter to Exelon dated January 8, 2015 (ADAMS Accession No. ML14323A682).

3.0 TECHNICAL EVALUATION

3.1 Description of TS Changes

The LCO for PBAPS TS 3.6.4.1, "Secondary Containment," requires that the secondary containment be operable in Modes 1, 2, and 3, during movement of recently irradiated fuel assemblies in secondary containment, and during operations with a potential for draining the reactor vessel. PBAPS SRs 3.6.4.1.1 through 3.6.4.1.4 provide the requirements to demonstrate that the secondary containment is operable. SR 3.6.4.1.2 requires verification that at least one door is closed in each secondary containment penetration. The intent of this requirement is to not breach secondary containment at any time when secondary containment is required. The SR currently reads as follows:

> Verify one secondary containment access door in each access opening is closed.

As discussed in the licensee's letter dated August 12, 2015, SR 3.6.4.1.2 would be revised to read as follows:

> Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry or exit.

3.2 Secondary Containment Safety Function

The PBAPS secondary containment consists of the reactor building, in conjunction with the reactor building heating and ventilation system and the standby gas treatment (SGT) system. The reactor building encloses the primary containment, the refueling and reactor servicing areas, new and spent fuel storage facilities, and other reactor auxiliary systems. The secondary containment serves as the containment during reactor refueling and maintenance operations when the primary containment is open and as an additional barrier when the primary containment is functional.

The secondary containment is a single system that performs a safety function. There is no redundant train or system that can perform the secondary containment function, should the secondary containment become inoperable. The safety function of the secondary containment

is to contain, dilute, and hold up fission products that may leak from primary containment following a DBA to ensure the control room operator and offsite doses are within the regulatory limits. In conjunction with operation of the SGT system and closure of certain valves whose lines penetrate the secondary containment, the secondary containment is designed to contain the fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in secondary containment prior to release to the environment. For the secondary containment to be considered operable, it must have adequate leak tightness to ensure that the required vacuum can be established and maintained by a single SGT subsystem when that system is in operation.

To prevent ground level exfiltration of radioactive material while allowing the secondary containment to be designed as a conventional structure, the secondary containment requires support systems to maintain the control volume pressure at less than atmospheric pressure. During normal operation, non-accident systems are used to maintain the secondary containment at a negative pressure. SR 3.6.4.1.3 requires verification that the secondary containment can be drawn down to ≥ 0.25 inch of vacuum water gauge in ≤ 180 seconds using one SGT subsystem. SR 3.6.4.1.4 requires verification that the secondary containment can be maintained ≥ 0.25 inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 10,500 cubic feet per minute. Following an accident, the SGT system ensures the secondary containment pressure is less than the external atmospheric pressure.

The secondary containment boundary is the combination of walls, floor, roof, ducting, doors, hatches, penetrations, and equipment that physically form the secondary containment. For penetrations that consist of a hatch, typically one hatch is provided. For penetrations that contain doors, there exists at least one inner and one outer door. In some cases, secondary containment access openings are shared such that there are multiple inner or outer doors. All secondary containment access doors are normally kept closed, except when the access opening is being used for entry and exit of personnel or equipment.

The PBAPS secondary containment design does not prevent simultaneous inner and outer door opening through mechanical or electrical interlocks; therefore, occasional brief, simultaneous door openings are possible. Based on the current wording in SR 3.6.4.1.2, a simultaneous opening of both an inner and outer door in an access opening would require declaring secondary containment inoperable. Furthermore, since the secondary containment is a single-train system, 10 CFR 50.72 and 50.73 require prompt notification and submittal of a Licensee Event Report (LER) whenever the secondary containment is inoperable, regardless of the length of time of the inoperability.

The licensee stated that it is possible for an unintentional, simultaneous opening of both an inner and outer secondary containment access door. The licensee considers that declaring secondary containment inoperable for these brief occurrences is not warranted. The proposed changes to SR 3.6.4.1.2, which is discussed in Section 3.1 of this safety evaluation (SE), are intended to address the brief simultaneous openings of the inner and outer doors such that the licensee would not need to declare secondary containment inoperable.

The NRC staff requested information from the licensee to reasonably assure the secondary containment will maintain its safety function with the proposed change. In response to the staff's request for additional information, the licensee, in its letter dated October 20, 2015, stated that

the intent of the proposed change is to allow for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit. Under these circumstances, the doors would be promptly closed following entry and exit, thus restoring the secondary containment boundary. The licensee indicated that the time that both doors would be open would typically be less than 10 seconds. The licensee stated that for situations involving planned simultaneous opening of the doors, secondary containment will be declared inoperable, and the appropriate TS action will be followed. The NRC staff finds that the intent of the proposed change is reasonable since the secondary containment boundary will be restored promptly, and the change only applies to inadvertent opening of both doors, not planned opening of the doors.

The licensee's letter dated October 20, 2015, further stated that at each secondary containment personnel access door, the door is equipped with a position switch to support a monitoring system, which consists of local indicating lights, a local audible alarm, and main control room (MCR) annunciator lights and alarms. The monitoring system operates as follows:

- When all doors are closed, the indicating light located above each door is not lit.

- When one inner door or one outer door is opened, the indicating lights above the opposing doors that are still closed are lit to warn against opening. The indicating light above the opened door is not lit.

- When both an inner and an outer door are opened, the indicating lights above each door are lit, an instantaneous audible alarm is annunciated, and after a preset time delay, an MCR alarm is annunciated to identify that secondary containment has been breached, and personnel are dispatched to investigate. For PBAPS, this preset time delay has been established at 10 seconds.

The licensee stated that the frequency of inadvertent, simultaneous opening events shall be minimized through required nuclear general employee training that provides guidance to station personnel to not open a secondary containment personnel access door if the indicating light is illuminated.

The preset time delay of 10 seconds for an MCR alarm due to an inadvertent, simultaneous opening on secondary containment personnel access doors is established by the licensee with the following considerations:

- It should be limited to the time it takes to traverse through a door, typically less than 10 seconds.

- In the safety analysis for a loss-of-coolant accident coincident with a loss of offsite power, the SGT system would not start until 16 seconds after the event.

- The simultaneous opening time should not have impact on the SGT system draw down time. In fact, the draw down time analysis takes no credit for differential pressure (i.e., conservatively assuming 0.0 inch of vacuum water gauge) for the secondary containment initial condition.

- The dose analysis assumes that secondary containment will not be drawn to a vacuum condition for 180 seconds. Surveillance testing has shown that the SGT system can draw down secondary containment in well under 60 seconds.

The NRC staff finds that the 10-second preset time delay has a reasonable technical basis since the applicable safety analyses remain valid.

The NRC staff reviewed the control of a brief, inadvertent secondary containment breach as described above, including the monitoring system and the licensee's evaluation of any impact on the existing safety analyses. The staff finds that the licensee's approach is acceptable since it assists station personnel in complying with the related TS SRs in that the safety function of secondary containment will be maintained.

3.3 Radiological Consequences

As discussed above in SE Section 2.0, the NRC approved a full scope implementation of an AST methodology for PBAPS, Units 2 and 3, by License Amendment Nos. 269 and 273 on September 5, 2008. The NRC staff reviewed the impact of modifying the PBAPS TSs to allow the secondary containment personnel access doors to be opened for entry and exit on all DBAs currently analyzed in the PBAPS UFSAR that could have the potential for significant dose consequences. Section 14 of the PBAPS UFSAR describes the DBAs and their radiological consequence analysis results.

The NRC staff evaluated the impact of modifying PBAPS TSs to allow secondary containment personnel access doors to be open for entry and exit on the licensee's design-basis radiological consequence dose analyses to ensure that the modification will not result in an increase in the dose consequences and that the resulting calculated doses will remain within the design criteria specified in 10 CFR 50.67 and the accident-specific design criteria outlined in RG 1.183. The NRC staff review of these DBAs determined that, based on the current PBAPS design bases, the brief, inadvertent, simultaneous opening of both an inner and outer personnel access door during normal entry and exit conditions, and their prompt closure by normal means, is bounded by the radiological dose consequence analysis. Because the typical draw down time using one SGT subsystem is under 60 seconds, margin exists to ensure that the secondary containment can be reestablished during brief, simultaneous opening of inner and outer secondary containment personnel access doors, and there is reasonable assurance that a failure of a safety system needed to control the release of radioactive material to the environment will not result. The brief, inadvertent, simultaneous opening of both secondary containment personnel access doors does not impact the design bases and will not result in an increase in any on-site or off-site dose.

Based on the above discussion, the NRC staff finds that the proposed changes do not affect the current radiological consequence analyses for PBAPS, Units 2 and 3. Therefore, the NRC staff concludes this change is acceptable with respect to the radiological consequences of DBAs. The NRC staff notes that this approval applies only to the opening of both an inner and outer secondary containment personnel access door during normal entry and exit and that this approval does not apply when maintenance is being performed on a secondary containment personnel access door.

3.4 Evaluation of TS Changes

The NRC staff reviewed the proposed changes to the TSs by considering whether the proposed SR would continue to meet the requirements of 10 CFR 50.36. The regulations do not specify the format or content of individual specifications. The proposed changes to SR 3.6.4.1.2 would add an exception to allow both doors, in a secondary containment access opening, to be opened simultaneously for normal entry or exit. This change clarifies the applicability of the requirement, but does not change the method of verifying secondary containment integrity. The NRC staff determined that the proposed SR would continue to the meet the requirements in 10 CFR 50.36(c)(3), which specifies that SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, facility operation will be within safety limits, and the LCOs will be met.

The TSs for PBAPS are based on the improved STS. The NRC staff reviewed the format and content of the corresponding TSs in NUREG-1433, Revision 4, and NUREG-1434, Revision 4, to determine if the proposed changes were consistent with the format and content of the NUREGs. The NRC staff found that the proposed changes were consistent with the format of NUREG-1433 and NUREG-1434 and the content of NUREG-1434. The corresponding TS in NUREG 1434 has a similar SR to the proposed revised SR for PBAPS, Units 2 and 3.

The licensee's letter dated August 12, 2015, provided revised TS Bases pages to be implemented with the associated TS changes. These pages were provided for information only and will be revised by the licensee in accordance with the TS Bases Control Program.

3.5 Technical Evaluation Conclusion

Based on the discussion in Sections 3.1 through 3.4 above, the NRC staff concludes that the proposed changes are 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 had 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 and change SRs. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, 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 (80 FR 20023). The Commission received one public comment generally asserting that the biweekly notice containing the proposed finding for PBAPS fails to meet the clear writing rule and violates safety codes (ADAMS Accession No. ML15139A024). The commenter did not specify which facility the comment pertains to or provide any further explanation. The NRC staff has reviewed its proposed finding for PBAPS for clarity and has determined that no modification to the proposed finding is necessary.

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) there is reasonable assurance that 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 Contributors: S. Peng
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M. Chernoff
R. Ennis

Date: February 1, 2016

February 1, 2016

Mr. Bryan C. Hanson
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE OF AMENDMENTS RE: SECONDARY CONTAINMENT ACCESS OPENINGS (CAC NOS. MF5783 AND MF5784)

Dear Mr. Hanson:

The Commission has issued the enclosed Amendments Nos. 303 and 307 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for the 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 February 23, 2015, as supplemented by letters dated August 12, 2015, and October 20, 2015.

The amendments modify the TSs to allow for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions.

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/

Richard B. Ennis, Senior 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. 303 to Renewed DPR-44
2. Amendment No. 307 to Renewed DPR-56
3. Safety Evaluation

cc w/enclosures: Distribution via Listserv

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OFFICE	DORL/LPL1-2/PM	DORL/LPL1-2/LA	DSS/STSB/BC	DRA/ARCB/BC	DSS/SCVB/BC
NAME	REnnis	LRonewicz	RElliott	UShoop (JDozier for)	RDennig (JBettle for)
DATE	01/20/16	12/17/15	12/24/15	1/4/16	1/7/16
OFFICE	OGC	DORL/LPL1-2/BC	DORL/LPL1-2/PM		
NAME	AGhosh	DBroaddus	REnnis		
DATE	1/19/16	02/01/16	02/01/16		

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