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

August 10, 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: SURVEILLANCE REQUIREMENTS FOR RECIRCULATION PUMP DISCHARGE VALVES (CAC NOS. MF7528 AND MF7529)

Dear Mr. Hanson:

The Commission has issued the enclosed Amendment Nos. 309 and 313 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 March 24, 2016, as supplemented by letter dated May 11, 2016.

The amendments revise the frequency for cycling of the recirculation pump discharge valves as specified in TS Surveillance Requirement (SR) 3.5.1.5. Specifically, the amendments change the frequency for the SR such that it is performed in accordance with the Inservice Testing Program.

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. 309 to Renewed DPR-44
2. Amendment No. 313 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. 309
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 March 24, 2016, as supplemented by letter dated May 11, 2016, 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. 309, 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 Renewed Facility Operating
License and Technical Specifications

Date of Issuance: August 10, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 309

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

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 marginal lines indicating the areas 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
3.5-5	3.5-5

(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. 309, 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.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.5	Verify each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position.	In accordance with the Inservice Testing Program.
SR 3.5.1.6	Verify automatic transfer of the power supply from the normal source to the alternate source for each LPCI subsystem inboard injection valve and each recirculation pump discharge valve.	In accordance with the Surveillance Frequency Control Program.
SR 3.5.1.7	----------NOTE---------- For the core spray pumps, SR 3.5.1.7 may be met using equivalent values for flow rate and test pressure determined using pump curves. ---------- Verify the following ECCS pumps develop the specified flow rate against a system head corresponding to the specified reactor pressure. SYSTEM / FLOW RATE / NO. OF PUMPS / SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF Core Spray: ≥ 3,125 gpm / 1 / ≥ 105 psig LPCI: ≥ 8,600 gpm / 1 / ≥ 20 psig	In accordance with the Surveillance Frequency Control Program.

(continued)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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. 313
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 March 24, 2016, as supplemented by letter dated May 11, 2016, 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. 313, 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 Renewed Facility Operating
License and Technical Specification

Date of Issuance: August 10, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 313

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

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 marginal lines indicating the areas 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
3.5-5	3.5-5

(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. 313, 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.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.5	Verify each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position.	In accordance with the Inservice Testing Program.
SR 3.5.1.6	Verify automatic transfer of the power supply from the normal source to the alternate source for each LPCI subsystem inboard injection valve and each recirculation pump discharge valve.	In accordance with the Surveillance Frequency Control Program.
SR 3.5.1.7	----------NOTE---------- For the core spray pumps, SR 3.5.1.7 may be met using equivalent values for flow rate and test pressure determined using pump curves. ---------- Verify the following ECCS pumps develop the specified flow rate against a system head corresponding to the specified reactor pressure. SYSTEM / FLOW RATE / NO. OF PUMPS / SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF Core Spray: ≥ 3,125 gpm / 1 / ≥ 105 psig LPCI: ≥ 8,600 gpm / 1 / ≥ 20 psig	In accordance with the Surveillance Frequency Control Program.

(continued)

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 309 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-44 AND

AMENDMENT NO. 313 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 March 24, 2016, as supplemented by letter dated May 11, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML16084A567 and ML16132A440, respectively), Exelon Generation Company, LLC (Exelon, the licensee), submitted a license amendment request (LAR) for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

The amendments would revise the frequency for cycling of the recirculation pump discharge valves as specified in Technical Specification (TS) Surveillance Requirement (SR) 3.5.1.5. The specific TS changes are discussed in safety evaluation (SE) Section 2.2, below.

2.0 REGULATORY EVALUATION

2.1 Background

PBAPS, Units 2 and 3, SR 3.5.1.5 requires verification that each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position. Currently, this SR needs to be performed once each plant startup prior to exceeding 23 percent rated thermal power (RTP), if the SR had not been performed within the previous 31 days.

PBAPS, Units 2 and 3, operate on a 24-month refueling cycle. With the current SR 3.5.1.5, if the plant operates in Mode 1 (i.e., power operation) for the entire operating cycle, the period between performances of this SR would be 24 months. However, if the plant had to shut down sometime during the operating cycle, SR 3.5.1.5 would need to be performed if it had not been

performed in the previous 31 days. The testing requirements following a mid-cycle plant shutdown are currently beyond what is required by the PBAPS Inservice Testing (IST) Program requirements. Accordingly, the licensee has proposed to revise the frequency for SR 3.5.1.5 such that it is performed in accordance with the IST Program.

2.2 Proposed TS Changes

SR 3.5.1.5 currently reads as follows:

SURVEILLANCE	FREQUENCY
NOTE Not required to be performed if performed within the previous 31 days. Verify each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position.	Once each startup prior to exceeding 23% RTP

The licensee's application dated March 24, 2016, originally proposed to change the frequency for SR 3.5.1.5 such that it was performed in accordance with the Surveillance Frequency Control Program (SFCP), which is described in PBAPS TS 5.5.14. As discussed in Amendment Nos. 278 and 281, for PBAPS, Units 2 and 3, respectively, dated August 27, 2010 (ADAMS Accession No. ML102100388), the SFCP has provisions to allow a licensee to change surveillance frequencies. However, since the recirculation pump discharge valves are subject to testing in accordance with the IST Program, in accordance with the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(f), the SFCP would not allow the test frequencies to be extended beyond that required in accordance with the IST Program. As such, following discussions with the U.S. Nuclear Regulatory Commission (NRC) staff, the licensee decided to change the proposed surveillance frequency such that SR 3.5.1.5 is performed in accordance with the IST Program. As shown in the supplement dated May 11, 2016, the amendments would revise SR 3.5.1.5 to read as follows:

SURVEILLANCE	FREQUENCY
Verify each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position.	In accordance with the Inservice Testing Program.

2.3 System Description

PBAPS, Units 2 and 3, TS 3.5, provides the requirements associated with the emergency core cooling system (ECCS) and the reactor core isolation cooling system. The ECCS is designed, in conjunction with the primary and secondary containment, to limit the release of radioactive

materials to the environment following a loss-of-coolant accident (LOCA). The ECCS uses two independent methods (flooding and spraying) to cool the core during a LOCA. The ECCS consists of the high pressure coolant injection system, the core spray system, the low pressure coolant injection (LPCI) mode of the residual heat removal (RHR) system, and the automatic depressurization system (ADS). LCO 3.5.1, "ECCS – Operating," requires, in Modes 1, 2 and 3, that each ECCS injection/spray subsystem and the ADS function of five safety/relief valves be operable.

As described in PBAPS Updated Final Safety Analysis Report (UFSAR) Section 4.8.6.3, the LPCI mode of the RHR system functions to restore, and if necessary, maintain the coolant inventory in the reactor pressure vessel (RPV) after a LOCA so that the core is sufficiently cooled to preclude excessive fuel clad temperatures and subsequent energy release due to metal-water reaction. During LPCI operation, the main system pumps take suction from the suppression pool and discharge into the RPV through the recirculation loops.

The design of the reactor recirculation system (RRS) is discussed in Section 3.0 of Attachment 1 to the licensee's application dated March 24, 2016, and in Section 4.3 of the PBAPS UFSAR. The RRS consists of two recirculation pump loops external to the RPV and jet pumps, which are internal to the RPV. Each loop contains one variable speed motor-driven recirculation pump, a suction valve, a discharge valve, and associated piping and instrumentation. The recirculation loops are part of the reactor coolant pressure boundary and are located inside the drywell (i.e., primary containment) structure, which contains an inert atmosphere during power operations. The RRS is designed to provide a forced coolant flow to remove heat from the fuel. The system also provides a means to change reactor power level by varying the speed of the recirculation pumps.

The PBAPS recirculation pump discharge valves (MO-2-02-53A (Unit 2), MO-2-02-53B (Unit 2), MO-3-02-53A (Unit 3), and MO-3-02-53B (Unit 3)) are normally-open, safety-related motor-operated valves (MOVs). These valves perform an active function by closing to prevent diversion of LPCI flow following a design-basis LOCA. Specifically, if a postulated design-basis LOCA were to occur, the recirculation pump discharge valves would receive an automatic signal to close from the LPCI system logic. The closure is necessary to isolate a pipe rupture occurring in the suction line of a recirculation loop. The closure ensures that LPCI operation will not discharge makeup water back through the recirculation pump and out the break. This helps ensure the ability of the LPCI system to perform its safety function of providing core cooling following a LOCA. The recirculation pump discharge valves have no safety function in the open position and remain open during normal power operation. As discussed in the TS Bases for SR 3.5.1.5, cycling of the recirculation pump discharge valves through one complete cycle of full travel demonstrates that the valves are mechanically operable and will close when required.

2.4 Regulatory Requirements and Guidance

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

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)(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.

IST Requirements

Pursuant to 10 CFR 50.55a(f), "Inservice testing requirements," systems and components of boiling and pressurized water-cooled nuclear power reactors must meet the requirements of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (Code) and the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code), except where alternatives have been authorized by the NRC.

PBAPS, Units 2 and 3, are in the fourth 10-year interval of the IST Program. The licensee submitted a copy of the fourth 10-year IST Program in a letter to the NRC dated November 13, 2008 (ADAMS Accession No. ML083230056). As discussed in the letter, the fourth IST interval began on August 15, 2008, and is currently scheduled to end on August 14, 2018. The applicable ASME OM Code edition and addenda for PBAPS, Units 2 and 3, is the 2001 Edition through the 2003 Addenda.

The PBAPS IST Program designates the recirculation pump discharge valves as active Category B valves. In accordance with the OM Code, active valves are valves that are required to change position to accomplish a specific function in shutting down a reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident. Category B valves are those valves for which the seat leakage is inconsequential for fulfillment of the required function.

Subsection ISTC of the OM Code provides requirements for the IST of valves. The requirements applicable to the exercising test frequency of active Category B MOVs include the following:

- ITSC-3510 requires that the valves be exercised nominally every 3 months, except as provided for by ITSC-3521.

- ISTC-3521 states, in part, that the valves should be exercised during operation at power. However, if it is not practicable to exercise the valves at power, the valves may be exercised during cold shutdowns. In addition, the valves may be exercised during refueling outages, if it is not practicable to exercise the valves during cold shutdowns.

By letter dated November 28, 2007, as supplemented by letters dated March 19, 2008, and April 30, 2008 (ADAMS Accession Nos. ML073330605, ML080800041, and ML081220715, respectively), Exelon submitted Relief Request GVRR-1 to request use of ASME Code Case OMN-1, "Alternative Rules for Preservice and Inservice Testing of Certain Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants," Revision 1, in lieu of certain provisions of Subsection ISTC of the OM Code. The proposed alternative was authorized by NRC letter dated September 3, 2008 (ADAMS Accession No. ML081790539). The relief request applied to all active, non-skid mounted ASME Class 1, 2, and 3 MOVs in the IST Program (which includes the recirculation pump discharge valves).

Section 3.6.1, "Normal Exercising Requirements," of Code Case OMN-1, Revision 1, states that:

> All MOVs, within the scope of this Code Case, shall be full cycle exercised at least once per refueling cycle with the maximum time between exercises to be not greater than 24 mo. Full cycle operation of an MOV, as a result of normal plant operations or Code requirements, may be considered an exercise of the MOV, if documented. If full stroke exercising of an MOV is not practical during plant operation or cold shutdown, full stroke exercising shall be performed during the plant's refueling outage.

In summary, the PBAPS IST Program currently allows the recirculation pump discharge valves to be exercised at least once per refueling cycle with the maximum time between exercises to be not greater than 24 months, consistent with Code Case OMN-1, Revision 1.

Guidance Documents

NUREG-0800, "Standard Review Plan," Section 3.9.6, "Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints," Revision 3, dated March 2007 (ADAMS Accession No. ML070720041), in part, provides guidance for NRC staff review of applications related to IST Programs.

3.0 TECHNICAL EVALUATION

In the application dated March 24, 2016, the licensee provided the testing and maintenance history for the recirculation pump discharge valves for approximately the last 10 years. All four recirculation discharge valves were successfully exercised (i.e., stroking open/closed though full travel) for every test performed during this period. Additionally, the licensee searched the maintenance history for the valves and valve operators since the year 2000. No significant adverse trends were identified. The test results for exercising the valves are provided below in Tables 3-1 (Unit 2) and 3-2 (Unit 3).

Table 3-1
PBAPS, Unit 2, Recirculation Discharge Valves (MO-2-02-053A(B)) Test Results

Outage	Stroke Test Results	Comments
Refueling Outage 2R16 (fall 2006)	Satisfactory	
Refueling Outage 2R17 (fall 2008)	Satisfactory	Note 1
Refueling Outage 2R18 (fall 2010)	Satisfactory	Note 1
Refueling Outage 2R19 (fall 2012)	Satisfactory	Note 1
Refueling Outage 2R20 (fall 2014)	Satisfactory	Note 1
Maintenance Outage (December 2015)	Satisfactory	

Table 3-2
PBAPS, Unit 3, Recirculation Discharge Valves (MO-3-02-053A(B)) Test Results

Outage	Stroke Test Results	Comments
Refueling Outage 3R15 (fall 2005)	Satisfactory	
Refueling Outage 3R16 (fall 2007)	Satisfactory	Note 1
Maintenance Outage (February 2008)	Satisfactory	
Maintenance Outage (January 2009)	Satisfactory	
Refueling Outage 3R17 (fall 2009)	Satisfactory	
Maintenance Outage (November 2010)	Satisfactory	
Refueling Outage 3R18 (fall 2011)	Satisfactory	
Refueling Outage 3R19 (fall 2013)	Satisfactory	Note 1
Refueling Outage 3R20 (fall 2015)	Satisfactory	Note 1

Notes for Tables 3.1-1 and 3.1-2

1) Test was performed 24 months after the last test due to no plant shutdowns during the operating cycle.

As discussed above in SE Section 2.1, with the current SR 3.5.1.5, if the plant operates in Mode 1 (i.e., power operation) for the entire operating cycle, the period between performances of this SR would be 24 months. However, if the plant had to shut down sometime during the operating cycle, SR 3.5.1.5 would need to be performed if it had not been performed in the previous 31 days. The testing requirements following a mid-cycle plant shutdown are currently beyond what is required by the PBAPS IST Program requirements. The proposed amendments would have the effect of only requiring the recirculation pump discharge valves to be exercised on a refueling outage frequency (i.e., no greater than 24 months). Testing would no longer be required during mid-cycle maintenance outages.

Consistent with the requirements in 10 CFR 50.55a(f), IST for pumps and valves is performed in order to verify the operational readiness of these components. Meeting the requirements of 10 CFR 50.55a(f) provides reasonable assurance that the pumps and valves are capable of performing their intended safety functions. As such, the NRC staff finds that the PBAPS IST Program provides appropriate requirements to verify that the recirculation pump discharge valves are operable and capable of performing their safety function to close in response to an

LPCI system logic signal. Using the IST Program to define the surveillance frequency for these valves is also consistent with establishing an SR that provides reasonable assurance that the associated LCO will be met, consistent with 10 CFR 50.36(c)(3). Furthermore, the testing and maintenance history for these valves demonstrates that a 24-month surveillance frequency is justified, since each recirculation discharge valve was successfully stroked since 2005, with about half of these tests being performed on a 24-month frequency (see Tables 3-1 and 3-2 above). Based on these findings, the NRC staff concludes that the proposed amendments are acceptable.

Attachment 3 to the licensee's application dated March 24, 2016, provided revised TS Bases pages to be implemented with the associated TS changes. These pages were provided for information only and will be revised in accordance with the TS Bases Control Program discussed in PBAPS TS 5.5.10.

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, and there has been no public comment on such finding (June 7, 2016; 81 FR 36619). 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 Contributor: R. Ennis

Date: August 10, 2016

August 10, 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: SURVEILLANCE REQUIREMENTS FOR RECIRCULATION PUMP DISCHARGE VALVES (CAC NOS. MF7528 AND MF7529)

Dear Mr. Hanson:

The Commission has issued the enclosed Amendment Nos. 309 and 313 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 March 24, 2016, as supplemented by letter dated May 11, 2016.

The amendments revise the frequency for cycling of the recirculation pump discharge valves as specified in TS Surveillance Requirement (SR) 3.5.1.5. Specifically, the amendments change the frequency for the SR such that it is performed in accordance with the Inservice Testing Program.

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. 309 to Renewed DPR-44
2. Amendment No. 313 to Renewed DPR-56
3. Safety Evaluation

cc w/enclosures: Distribution via Listserv

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