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

December 17, 2019

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE OF AMENDMENT NOS. 329 AND 332 REGARDING THE ADOPTION OF TSTF-500, "DC ELECTRICAL REWRITE – UPDATE TO TSTF-360" (EPID L-2019-LLA-0118)

Dear Mr. Hanson:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment Nos. 329 and 332 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (Peach Bottom), Units 2 and 3, respectively. These amendments consist of changes to the Technical Specifications (TSs) and Renewed Facility Operating Licenses in response to your application dated June 7, 2019, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19158A312) as supplemented by letters dated August 29, 2019, and October 3, 2019 (ADAMS Accession Nos. ML19158A312, ML19241A465, and ML19276F281, respectively).

The amendments revise the requirements related to direct current (DC) electrical systems in TS 3.8.4, "DC Sources - Operating," to add a condition for the opposite unit's battery charger based on the NRC-approved Technical Specifications Task Force (TSTF) Traveler TSTF-500, Revision 2, "DC Electrical Rewrite – Update to TSTF-360." Specifically, the proposed condition allows a 72-hour completion time for an opposite unit battery charger that is required for certain plant configurations.

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

Sincerely,

Jennifer C. Tobin, Project Manager
Plant Licensing Branch 1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosures:
1. Amendment No. 329 to DPR-44
2. Amendment No. 332 to DPR-56
3. Safety Evaluation

cc: 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. 329
Renewed License No. DPR-44

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), dated June 7, 2019, as supplemented by letters dated August 29, 2019, and October 3, 2019, 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. 329, 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 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: December 17, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 329

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following page of Renewed Facility Operating License No. DPR-44 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 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
----	3.8-28a
3.8-29	3.8-29
3.8-29a	3.8-29a

(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 4016 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 329, 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 (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required Unit 3 battery charger on one subsystem inoperable.	B.1 Restore Unit 3 battery terminal voltage to greater than or equal to the minimum established float voltage.	12 hours
	AND	
	B.2 Verify battery float current ≤ 2 amps.	24 hours AND Once per 12 hours thereafter
	AND	
	B.3 Restore battery charger to OPERABLE status.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition A or B.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems—Operating," when Condition C results in de-energization of a Unit 2 4 kV emergency bus. ---------- C.1 Restore Unit 3 DC electrical power subsystem to OPERABLE status.	12 hours
D. One Unit 2 battery charger on one subsystem inoperable.	D.1 Restore Unit 2 battery terminal voltage to greater than or equal to the minimum established float voltage. AND D.2 Verify battery float current $\leq$ 2 amps. AND D.3 Restore battery charger to OPERABLE status.	2 hours Once per 12 hours 72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition D.	E.1 Restore Unit 2 DC electrical power subsystem to OPERABLE status.	2 hours
F. Required Action and Associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours
G. Two or more inoperable DC electrical power subsystems.	G.1 Enter LCO 3.0.3.	Immediately

UNITED STATES
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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. 332
Renewed License No. DPR-56

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Exelon Generation Company, LLC (Exelon Generation Company), dated June 7, 2019, as supplemented by letters dated August 29, 2019, and October 3, 2019, 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. 332, 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 immediately as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: December 17, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 332

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

RENEWED FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following page of Renewed Facility Operating License No. DPR-56 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 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
----	3.8-28a
3.8-29	3.8-29
3.8-29a	3.8-29a

(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 4016 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 332, 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 (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required Unit 2 battery charger on one subsystem inoperable.	B.1 Restore Unit 2 battery terminal voltage to greater than or equal to the minimum established float voltage.	12 hours
	AND	
	B.2 Verify battery float current ≤ 2 amps.	24 hours AND Once per 12 hours thereafter
	AND	
	B.3 Restore battery charger to OPERABLE status.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition A or B.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems—Operating," when Condition C results in de-energization of a Unit 3 4 kV emergency bus. ---------- C.1 Restore Unit 2 DC electrical power subsystem to OPERABLE status.	12 hours
D. One Unit 3 battery charger on one subsystem inoperable.	D.1 Restore Unit 3 battery terminal voltage to greater than or equal to the minimum established float voltage. AND D.2 Verify battery float current $\leq$ 2 amps. AND D.3 Restore battery charger to OPERABLE status.	2 hours Once per 12 hours 72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition D.	E.1 Restore Unit 3 DC electrical power subsystem to OPERABLE status.	2 hours
F. Required Action and Associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours
G. Two or more inoperable DC electrical power subsystems.	G.1 Enter LCO 3.0.3.	Immediately

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 329 AND 332

TO RENEWED FACILITY OPERATING LICENSE NOS. DPR-44 AND 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 June 7, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19158A312), as supplemented by letters dated August 29, 2019, and October 3, 2019 (ADAMS Accession Nos. ML19241A465 and ML19276F281, respectively), Exelon Generation Company, LLC (Exelon, the licensee) requested amendments to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (Peach Bottom), Units 2 and 3, respectively. The license amendment request (LAR) would revise Technical Specification (TS) 3.8.4, "DC [Direct Current] Sources - Operating," to add a condition for the opposite unit's battery charger based on the U.S. Nuclear Regulatory Commission (NRC or the Commission)-approved Technical Specifications Task Force (TSTF) Traveler TSTF-500, Revision 2, "DC Electrical Rewrite – Update to TSTF-360." Specifically, the proposed condition would allow a 72-hour completion time (CT) for an opposite unit battery charger that is required for certain plant configurations. The proposed new condition in the October 3, 2019, supplement supersedes the proposed new condition in the June 7, 2019, LAR.

The supplemental letters dated August 29, 2019, and October 3, 2019, provided additional information that clarified that the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (August 13, 2019; 84 FR 40096). The proposed changes involve the addition of New Condition (B) that would apply when one required battery charger on one subsystem is inoperable and would have three associated new Required Actions B.1, B.2, and B.3. The new Required Actions would provide a tiered response that focuses on returning the battery to the fully charged state and restoring a fully qualified charger to operable status in a specific time. Accordingly, the other Conditions in TS 3.8.4 are proposed to be renumbered.

The Notice of Availability for TSTF-500, Revision 2, was published in the *Federal Register* on September 1, 2011 (76 FR 54510) to announce the availability of the model application and model safety evaluation (ADAMS Accession No. ML111751792) for plant-specific adoption of TSTF-500, Revision 2 (ADAMS Accession No. ML092670242), as part of the consolidated line

item improvement process. This Notice of Availability was later corrected to clarify that TSTF-500 was available for plant-specific adoption, but not under the consolidated line item improvement process. The clarifying Notice of Availability was published in the *Federal Register* on November 8, 2011 (76 FR 69296).

Provided in TSTF-500, Revision 2, Attachment B, "Revisions to Revision 1 of the ISTS [Improved Standard Technical Specifications] NUREGs," are the changes to Revision 1 of the ISTS NUREGs to incorporate TSTF-500. In TSTF-500, Revision 2, it is stated that the changes in Attachment B should be used for plants that have not adopted TSTF-360. Since Peach Bottom had not adopted TSTF-360, and the Peach Bottom TSs are based on NUGEG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," the NRC staff used the changes to the BWR/4 Standard Technical Specifications in Attachment B of TSTF-500, Revision 2, as the model for evaluating the proposed Peach Bottom TS changes.

2.0 REGULATORY EVALUATION

The construction permit for Peach Bottom, Units 2 and 3, was issued by the Atomic Energy Commission (AEC) on January 31, 1968. As discussed in Appendix H to the Peach Bottom 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 Peach Bottom UFSAR contains an evaluation of the design basis of Peach Bottom, Units 2 and 3, against the draft GDC. The licensee concluded that Peach Bottom, Units 2 and 3, conform with 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 included a consolidation from 70 to 64 criteria. As discussed in the 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. The Commission additionally stated that, "At the time of the 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 and determined to be safe and licensed by the Commission.

The licensee for Peach Bottom, Units 2 and 3, 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 used the following regulatory requirements for the review of the LAR:

- Peach Bottom UFSAR, Appendix H, "Conformance to AEC (NRC) Criteria," which states that Peach Bottom, Units 2 and 3, conform with the intent of the AEC proposed GDC for Nuclear Power Plants dated July 1967. The proposed GDC 24 and 39 are applicable to Peach Bottom, Units 2 and 3, electrical power systems.

Criterion 24, "Emergency Power for Protection Systems," states:

> In the event of loss of all offsite power, sufficient alternate sources of power shall be provided to permit the required functioning of the protection systems.

Criterion 39, "Emergency Power for Engineered Safety Features," states:

> Alternate power systems shall be provided and designed with adequate independency, redundancy, capacity, and testability to permit the functioning required of the engineered safety features. As a minimum, the onsite power system and the offsite power system shall each, independently, provide this capacity assuming a failure of a single active component in each power system.

- The regulation under 10 CFR 50.36, "Technical specifications," which establishes the requirements related to the content of the TSs. Pursuant to 10 CFR 50.36(c), TSs are required to include items in five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings, (2) limiting conditions for operation (LCOs), (3) surveillance requirements (SRs), (4) design features, and (5) administrative controls. The proposed changes to the Peach Bottom TSs relate to the LCOs, SRs, and administrative controls categories.

The NRC staff used the following regulatory guidance documents for the review of the LAR:

- TSTF-500, Revision 2, "DC Electrical Rewrite – Update to TSTF-360," dated September 22, 2009.

- Model application and safety evaluation for plant-specific adoption of TSTF 500, Revision 2 (ADAMS Accession No. ML111751792) as published for availability in the *Federal Register* on September 1, 2011 (76 FR 54510).

3.0 TECHNICAL EVALUATION

3.1 System Description

As described in Section 3.1, "System Description," of the licensee's June 7, 2019, application:

> The DC electrical power system provides the [alternating current] AC emergency power system with control power. It also provides a source of reliable, uninterruptible 125/250 VDC [volts DC] power and 125 VDC control power and instrument power to Class 1E and non-Class 1E loads during normal operation and for safe shutdown of the plant following any plant design basis event or accident. The DC electrical power system is designed to have sufficient independence, redundancy, and testability to perform its safety functions, assuming a single failure....There are two independent divisions per unit, designated Division I and Division II. Each division consists of two 125 VDC batteries. The two 125 VDC batteries in each division are connected in series. Each 125 VDC battery has two chargers (one normally inservice charger and one standby charger) that are exclusively associated with that battery and cannot be interconnected with any other 125 VDC battery. The chargers are supplied from

> separate 480 V motor control centers (MCCs). Each of these MCCs is connected to an independent emergency AC bus.
>
> During normal operation, the DC loads are powered from the battery chargers with the batteries floating on the system. In case of loss of normal power to the battery charger, the DC loads are powered from the batteries.
>
> Each of the Unit's two DC electrical power divisions ... is separately housed in a ventilated room apart from its chargers and distribution centers. Each division is separated electrically from the other division to ensure that a single failure in one division does not cause a failure in a redundant division. There is no sharing between redundant Class 1 E divisions such as batteries, battery chargers, or distribution panels.

As described in the Peach Bottom UFSAR, Section 1.6, "Plant Description," and Section 8.7, "125/250 VDC Power Supplies of and Distribution," the two safety-related 125/250-VDC systems are designed to provide an adequate power supply for the engineered safeguard loads of one unit, and the required shutdown loads of the second unit, with concurrent loss-of-offsite power (LOOP) and any single failure in the DC system:

> Each of the two independent safety-related 125/250 VDC systems per unit are of adequate size to provide control and switching power to safeguard systems and apparatus, DC auxiliaries, and motor operated valves until AC power sources are restored.
>
> Power required for the larger loads, such as DC motor driven pumps and valves, is supplied at 250 V from the two 125 V sources of each [DC] system connected in series and distributed through 250 VDC [MCCs] motor control centers.
>
> Power for all DC control functions, such as that required for the control of the 13 [kilo V] kV and 4 kV circuit breakers, control relays, and annunciators, and power for exit lighting, is supplied at 125 V from each of the two 125 V sources of each DC system and distributed through 125 VDC power distribution panels.

As stated in the Peach Bottom UFSAR, Appendix F.3, "Shared Systems and equipment":

> The Units 2 and 3 batteries supply DC power to the four shared diesel generators and their associated 4 kV emergency switchgear. The Unit 2 batteries supply control power to the E1 and E2 diesel generators and their associated 4 kV emergency switchgears in Units 2 and 3 (E12, E13, E22, E23). Similarly, the Unit 3 batteries supply control power to the E3 and E4 diesel generators and their associated 4 kV emergency switchgears in Units 2 and 3 (E32, E33, E42, E43).

3.2 Evaluation of Proposed TS 3.8.4 (DC Sources - Operating) Changes

The Peach Bottom, Unit 2 TS LCO 3.8.4 requires the following DC electrical power subsystems to be operable: (a) Unit 2 Division I and Division II DC electrical power subsystems; and (b) Unit 3 Division I and Division II DC electrical power subsystems. The Peach Bottom, Unit 2 TS 3.8.4 is applicable in Modes 1, 2, and 3. The following detailed information for the Unit 2 TS

LCO 3.8.4 is provided in Section 3.3, "Basis for Inter-unit LCO," of the licensee's June 7, 2019, application:

> The Unit 2 Division I (consisting of the 2A and 2C batteries) and Division II (consisting of the 2B and 2D batteries) DC electrical power subsystems, with each DC subsystem consisting of two 125 V station batteries in series, two battery chargers (one per battery), and the corresponding control equipment and interconnecting cabling supplying power to the associated bus, are required to be OPERABLE to ensure the availability of the required power to shut down the reactor and maintain it in a safe condition after an abnormal operational transient or a postulated Design Basis Accident (DBA). In addition, DC control power (which provides control power for the 4 kV load circuit breakers and the feeder breakers to the 4-kV emergency buses) for two of the four 4 kV emergency buses, as well as control power for two of the four emergency diesel generators, is provided by the Unit 3 DC electrical power subsystems. Therefore, Unit 3 Division I and Division II DC electrical power subsystems are also required to be OPERABLE to support the operation of Unit 2.

The Peach Bottom Unit 3 TS LCO 3.8.4 requires the following DC electrical power subsystems to be operable: (a) Unit 3 Division I and Division II DC electrical power subsystems; and (b) Unit 2 Division I and Division II DC electrical power subsystems. The Peach Bottom Unit 3 TS 3.8.4 is applicable in Modes 1, 2, and 3. The following detailed information for the Unit 3 TS LCO 3.8.4 is provided in Section 3.3 of the licensee's June 7, 2019, application:

> [T]he Unit 3 Division I (consisting of the 3A and 3C batteries) and Division II (consisting of the 3B and 3D batteries) DC electrical power subsystems, with each DC subsystem consisting of two 125 V station batteries in series, two battery chargers (one per battery), and the corresponding control equipment and interconnecting cabling supplying power to the associated bus, are required to be OPERABLE to ensure the availability of the required power to shut down the reactor and maintain it in a safe condition after an abnormal operational transient or a postulated DBA. In addition, DC control power (which provides control power for the 4 kV load circuit breakers and the feeder breakers to the 4-kV emergency bus) for two of the four 4 kV emergency buses, as well as control power for two of the four emergency diesel generators, is provided by the Unit 2 DC electrical power subsystems. Therefore, Unit 2 Division I and Division II DC electrical power subsystems are also required to be OPERABLE to support the operation of Unit 3.

The licensee proposed similar changes to both Peach Bottom, Units 2 and 3 TS 3.8.4. Thus, the NRC staff's evaluation for the proposed TS 3.8.4 changes is applicable to both Peach Bottom, Units 2 and 3 TS 3.8.4.

3.2.1 Peach Bottom Unit 2 and Unit 3 TS 3.8.4; New Condition B (Added); Change (1)

Peach Bottom Unit 2 TS 3.8.4; New Condition B (Added)

New Peach Bottom Unit 2 TS 3.8.4 Condition B would state:

B. One required Unit 3 battery charger on one subsystem inoperable.	B.1 Restore Unit 3 battery terminal voltage to greater than or equal to the minimum established float voltage.	12 hours
	AND	
	B.2 Verify battery float current ≤ 2 amps.	*24 hours* *AND* *Once per 12 hours thereafter*
	AND	
	B.3 Restore battery charger to OPERABLE status.	72 hours

Peach Bottom, Unit 3 TS 3.8.4; New Condition B (Added)

New Peach Bottom, Unit 3 TS 3.8.4 Condition B would state:

B. One required Unit 2 battery charger on one subsystem inoperable.	B.1 Restore Unit 2 battery terminal voltage to greater than or equal to the minimum established float voltage.	12 hours
	AND	
	B.2 Verify battery float current ≤ 2 amps.	*24 hours* *AND* *Once per 12 hours thereafter*
	AND	
	B.3 Restore battery charger to OPERABLE status.	72 hours

Evaluation of Peach Bottom, Unit 2 and Unit 3 TS 3.8.4; New Condition B (Added); Change (1)

New Condition B would apply when one required battery charger on one subsystem is inoperable and would have three associated new Required Actions B.1, B.2, and B.3. The new Required Actions would provide a tiered response that focuses on returning the battery to the fully charged state and restoring a fully qualified charger to operable status in a specific time.

In Section 3.4, "Discussion of proposed TS changes," of the licensee's June 7, 2019, application, the licensee stated that the opposite unit (Unit 3 or Unit 2) battery charger is modified by the word "required" in the proposed new Condition B to denote that only specific batteries from the opposite unit are required to support operation of the unit for certain plant configurations. The licensee provided the following information:

> For Unit 2, the required Unit 3 DC subsystems are allowed to consist of only the following: 1) Division I DC electrical power subsystem is allowed to be only the 125 V battery [3]C, an associated battery charger, and the corresponding control equipment and interconnecting cabling supplying 125 V power to the associated bus; and 2) Division II DC electrical power subsystem is allowed to be only the 125 V battery [3]D, an associated battery charger, and the corresponding control equipment and interconnecting cabling supplying 125 V power to the associated bus. This exception is allowed only if all Unit 3 250 VDC loads are removed from the associated bus. This is acceptable because the Unit 3 C and D batteries support 4 kV bus operations and EDG operations for both Units.
>
> Similarly, for Unit 3, the required Unit 2 DC subsystems are allowed to consist of only the following: 1) Division I DC electrical power subsystem is allowed to be only the 125 V battery [2]A, an associated battery charger, and the corresponding control equipment and interconnecting cabling supplying 125 V power to the associated bus; and 2) Division II DC electrical power subsystem is allowed to be only the 125 V battery [2]B, an associated battery charger, and the corresponding control equipment and interconnecting cabling supplying 125 V power to the associated bus. This exception is allowed only if all Unit 2 250 VDC loads are removed from the associated bus. This is acceptable because the Unit 2 A and B batteries support 4 kV bus operations and EDG operations for both Units.

Based on the above statements from the licensee, the NRC staff noted that the proposed new Unit 2 TS 3.8.4 Condition B would apply when: (1) one Unit 3 battery charger associated with the 125 V battery 3C or 3D is inoperable and (2) all Unit 3 250 VDC loads are removed from the associated DC bus. Similarly, the proposed new Unit 3 TS 3.8.4 Condition B will apply when: (1) one Unit 2 battery charger associated with the 125 V battery 2A or 2B is inoperable and (2) all Unit 2 250 VDC loads are removed from the associated bus.

New Required Action B.1 would require the affected required opposite unit battery terminal voltage to be restored to greater than or equal to the minimum established float voltage within 12 hours.

The proposed 12-hour CT for the new Required Action B.1 is longer than the 2-hour CT specified in the TSTF-500 for restoring the unit-specific battery terminal voltage to greater than or equal to the minimum established float voltage. The purpose of the 2-hour CT specified in the TSTF-500 is to provide time for returning a specific-unit inoperable battery charger to operable status or for reestablishing an alternate means (i.e., spare battery charger) of restoring battery terminal voltage to greater than or equal to the minimum established float voltage.

The licensee provided the following justification for the proposed 12-hour CT for the new Required Action B.1:

> The 12-hour Completion Time to restore the affected battery to its minimum established float voltage (123.5 V) is different than the TSTF-500 requirements but consistent with current PBAPS [Peach Bottom] licensing design basis and takes into consideration the current inter-unit margin of 10 hours between the Units (i.e., 2 hours for Unit that has the inoperable battery charger and 12 hours for the opposite Unit for *any* condition that causes an inoperable DC electrical subsystem). This inter-unit margin difference of 10 hours was preserved by adding 10 hours to the Required Action Completion Time established in TSTF-500 for restoring the battery minimum established float voltage.

The Peach Bottom TS 3.8.4 existing Condition B (one opposite unit DC electrical power subsystem inoperable for reason other than existing Condition A) requires the restoration of the opposite unit DC electrical power subsystem (including battery, battery charger) within 12-hour CT. Since the Peach Bottom current TS requires restoring an inoperable opposite unit battery charger to operable status within 12 hours, the NRC staff finds that the proposed 12-hour CT for the Required Action B.1 will provide an allowance for returning the inoperable required opposite unit battery charger to operable status or for reestablishing an alternate means of restoring the affected battery's terminal voltage to greater than or equal to the minimum established float voltage.

In Section 3.1 of the licensee's June 7, 2019, application, the licensee stated that two permanent non-safety-related alternate battery chargers (one per unit) are being installed to ensure the battery can be restored to its minimum established float voltage within the required CT (12 hours) when the operating and standby safety-related battery chargers become inoperable. At the end of the 12 hours, a terminal voltage of at least the minimum established float voltage provides indication that the opposite unit battery is on the exponential charging current portion of its recharging cycle. This provides assurance that the battery can be restored to its fully charged condition from any discharge that might have occurred due to the charger inoperability. The NRC staff finds the proposed new Required Action B.1 and its associated CT acceptable because the action to restore battery terminal voltage to greater than or equal to the minimum established float voltage is consistent with TSTF-500 as the 24-hour CT provides enough time for the battery to be fully recharged with sufficient capacity to perform its safety function, and the 12-hour CT is based on Peach Bottom current TS requirements.

New Required Action B.2 would require that the battery float current be verified as less than or equal to 2 amperes (amps) within 24 hours and once per 12 hours thereafter. This would indicate that, if the battery had been discharged as the result of the inoperable battery charger, it had been recharged and is fully capable of supplying the maximum expected load requirement.

The licensee initially proposed the CT of "once per 12 hours" for the new Required Action B.2. In its supplemental letter dated October 3, 2019, the licensee revised the CT for Required Action B.2 that states "24 hours and Once per 12 hours." The letter states:

> The battery capacity is rated at 1800 amp-hours when fully charged. TS 3.8.4 Action B.1 Completion Time is 12 hours. Therefore, assuming a total discharge time of 12 hours, the discharge is 12x90 = 1080 amp-hours. ... it would take approximately 10.8 hours [(1080 amps X1.1)/ 110 amps] to recharge the battery

> conservatively with the 200-amp alternate battery charger in float charge mode. Adding additional margin of 1.2 hours then establishes a 12-hour recovery time, which will be added to the existing 12-hour Action B.1 Completion Time for a total of 24-hour Completion Time for Action B.2 (battery fully charged as indicated by float current less than or equal to two amps). The requirement for a periodic 12-hour surveillance check thereafter of battery fully charged status is maintained.
>
> ... Based on the data provided from previous discharge tests, it is reasonable to assume that a station battery discharged as a result of a worst-case discharge from an inoperable battery charger can be recharged to the minimum established terminal voltage and a float current of less than 2 amps within 12 hours.

The NRC staff finds that the proposed 24 hours for recharging the required opposite unit battery to the fully charged state with a float current of less than or equal to 2 amps is reasonable since the battery terminal voltage will be at least at the minimum established float voltage (Required Action B.1) within the first 12 hours. In addition, since the Peach Bottom current TS 3.8.4 existing Condition C (inoperable unit-specific battery charger) requires the periodic check of a unit-specific battery float current once per 12 hours, the NRC staff finds it acceptable that the proposed CT of "once per 12 hours thereafter" for periodically verifying the required opposite unit battery float current is consistent with Peach Bottom current TS requirements.

If at the expiration of the 24-hour period or within the subsequent periodic 12-hour check, the battery float current is not less than or equal to 2 amps, this indicates that there may be additional battery problems, and the battery must be declared inoperable. The verification of the Required Action B.2 provides assurance that the battery has sufficient capacity to perform its safety function. The NRC staff finds the proposed new Required Action B.2 and its associated CTs acceptable because the action to verify battery fully charged state with float current is consistent with TSTF-500; the 24-hour CT provides enough time for the battery to be fully recharged with sufficient capacity to perform its safety function; and the periodic 12-hour CT is applicable to Peach Bottom.

New Required Action B.3 would limit the restoration time for the inoperable battery charger to 72 hours. According to TSTF-500, this action is applicable if an alternate means of restoring battery terminal voltage to greater than or equal to the minimum established float voltage has been used (e.g. balance of plant non-Class 1E battery charger). In Section 3.1 of its June 7, 2019, application, the licensee stated that two permanently installed non-safety-related alternate battery chargers (one per unit) are being provided to restore the opposite unit battery to its minimum established float voltage within the required CT (12 hours). In Attachment 3 of its June 7, 2019, application, the licensee stated that the 72-hour CT reflects a reasonable time to restore the qualified battery charger to operable status. The NRC staff finds that the new Required Action B.3 and its associated CT are acceptable because the action to restore the battery chargers to operable status is consistent with TSTF-500, and the 72-hour CT is applicable to Peach Bottom.

Based on the above, the NRC staff concludes that the proposed new Condition B, with its associated Required Actions and CTs, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.2.2 Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition B (Revised and Renumbered as Condition C); Change (2)

Peach Bottom, Unit 2 TS 3.8.4; Current Condition B (Revised and Renumbered as Condition C)

Current Peach Bottom, Unit 2 TS 3.8.4 Condition B states:

B.	One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition A.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems–Operating," when Condition B results in de-energization of a Unit 2 4 kV emergency bus. ----------	
		B.1 Restore Unit 3 DC electrical power subsystem to OPERABLE status.	12 hours

Revised and renumbered Peach Bottom, Unit 2 TS 3.8.4 Condition C would state:

~~B~~C.	One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition A or B.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems–Operating," when Condition C results in de-energization of a Unit 2 4 kV emergency bus. ----------	
		~~B~~C.1 Restore Unit 3 DC electrical power subsystem to OPERABLE status.	12 hours

Peach Bottom, Unit 3 TS 3.8.4; Current Condition B (Revised and Renumbered as Condition C)

Current Peach Bottom, Unit 3 TS 3.8.4 Condition B states:

B.	One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition A.	---------- NOTE ---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems – Operating," when Condition B results in de-energization of a Unit 3 4 kV emergency bus. ----------	
	B.1	Restore Unit 2 DC electrical power subsystem to OPERABLE status.	12 hours

Revised and renumbered Peach Bottom, Unit 3 TS 3.8.4 Condition C would state:

~~B~~C.	One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition A or B.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems – Operating," when Condition C results in de-energization of a Unit 3 4 kV emergency bus. ----------	
	~~B~~C.1	Restore Unit 2 DC electrical power subsystem to OPERABLE status.	12 hours

Evaluation of Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition B (Revised and Renumbered as Condition C); Change (2)

The existing Condition B (one opposite unit DC electrical power subsystem is inoperable for reasons other than the existing Condition A) would be revised and renumbered as Condition C, and the Condition B referenced in the existing Note would be renumbered as Condition C. The existing Required Action B.1 would be renumbered as Required Action C.1 with the same 12-hour CT. The NRC staff finds that the renumbering of Condition B and Required Action B.1 as Condition C and Required Action C.1, respectively, is editorial in nature and is, therefore, acceptable.

The renumbered Condition C would apply when one opposite unit DC electrical power subsystem is inoperable for reasons other than the existing Condition A or new Condition B (from Section 3.2.1 of this SE). The new Condition B (one required opposite unit battery charger inoperable), will also render the DC subsystem inoperable but will allow a longer CT for restoring the inoperable DC subsystem to operable status. Thus, the new Condition B should be excluded from the renumbered Condition C.

The NRC staff finds that the proposed revised and renumbered Condition C reflects the addition of the new Condition B to the TS 3.8.1 and is, therefore, acceptable.

Based on the above, the NRC staff concludes that the proposed revised and renumbered Condition C, with its associated Required Action and CT, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.2.3 Peach Bottom, Units 2 Unit 3 TS 3.8.4; Current Condition C (Revised and Renumbered as Condition D); Change (3)

Peach Bottom, Unit 2 TS 3.8.4; Current Condition C (Revised and Renumbered as Condition D)

Current Peach Bottom, Unit 2 TS 3.8.4 Condition C with associated Required Actions C.1, C.2, C.3, and CTs state:

C. One battery charger on one subsystem inoperable.	C.1	Restore battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	AND		
	C.2	Verify battery float current ≤ 2 amps.	Once per 12 hours
	AND		
	C.3	Restore battery charger to OPERABLE status.	72 hours

Revised and renumbered Peach Bottom, Unit 2 TS 3.8.4 Condition D with associated Required Actions D.1, D.2, D.3, and CTs would state:

D. One [illegible] battery charger on one subsystem inoperable.	D.1	Restore [illegible] battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	AND		
	D.2	Verify battery float current ≤ 2 amps.	Once per 12 hours
	AND		
	D.3	Restore battery charger to OPERABLE status.	72 hours

Peach Bottom, Unit 3 TS 3.8.4; Current Condition C (Revised and Renumbered as Condition D)

Current Peach Bottom, Unit 3 TS 3.8.4 Condition C with associated Required Actions C.1, C.2, C.3, and CTs state:

C. One battery charger on one subsystem inoperable.	C.1	Restore battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	AND		
	C.2	Verify battery float current ≤ 2 amps.	Once per 12 hours
	AND		
	C.3	Restore battery charger to OPERABLE status.	72 hours

Revised and renumbered Peach Bottom, Unit 3 TS 3.8.4 Condition D with associated Required Actions D.1, D.2, D.3, and CTs would state:

~~C.~~ One ~~UNIT 2~~ battery charger on one subsystem inoperable.	~~C~~.1	Restore ~~UNIT 2~~ battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	AND		
	~~C~~.2	Verify battery float current ≤ 2 amps.	Once per 12 hours
	AND		
	~~C~~.3	Restore battery charger to OPERABLE status.	72 hours

Evaluation of Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition C (Revised and Renumbered as Condition D); Change (3)

The existing Condition C (one battery charger on one subsystem inoperable) would be revised and renumbered as Condition D. The NRC staff finds that the renumbering of Condition C as Condition D is editorial in nature and is, therefore, acceptable.

The revised and renumbered Condition D would apply to one unit-specific battery charger on one subsystem inoperable. The addition of "Unit 2" and "Unit 3" to the renumbered Condition D for Unit 2 TS and Unit 3 TS, respectively, clarifies that the condition pertains to a unit-specific battery charger rather than a battery charger from the opposite unit. The NRC staff finds the renumbered Condition D acceptable since the addition of "Unit 2" and "Unit 3" to the existing condition statement correctly specifies the unit-specific nature of the condition.

The existing Required Actions C.1, C.2, and C.3 would be renumbered as Required Actions D.1, D.2, and D.3, respectively, with the same CTs and the specific unit would be added to Required Action D.1. The NRC staff finds that the renumbering of the Required Actions C.1, C.2, and C.3 as D.1, D.2, and D.3, respectively, is editorial in nature and is, therefore, acceptable.

Based on the above, the NRC staff concludes that the proposed revised and renumbered Condition D, with its associated Required Actions and CTs, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.2.4 Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition D (Revised and Renumbered as Condition E); Change (4)

Peach Bottom, Unit 2 TS 3.8.4; Current Condition D (Revised and Renumbered as Condition E)

Current Peach Bottom, Unit 2 TS 3.8.4 Condition D with associated Required Action D.1 and CT state:

D. One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition C.	D.1	Restore Unit 2 DC electrical power subsystem to OPERABLE status.	2 hours

Revised and renumbered Peach Bottom, Unit 2 TS 3.8.4 Condition E with associated Required Action E.1 and CT would state:

~~D~~. One Unit 2 DC electrical power subsystem inoperable for reasons other than Condition ~~C~~D.	~~D~~E.1	Restore Unit 2 DC electrical power subsystem to OPERABLE status.	2 hours

Peach Bottom, Unit 3 TS 3.8.4; Current Condition D (Revised and Renumbered as Condition E)

Current Peach Bottom, Unit 3 TS 3.8.4 Condition D with associated Required Action D.1 and CT state:

D. One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition C.	D.1	Restore Unit 3 DC electrical power subsystem to OPERABLE status.	2 hours

Revised and renumbered Peach Bottom, Unit 3 TS 3.8.4 Condition E with associated Required Action E.1 and CT would state:

~~D~~E. One Unit 3 DC electrical power subsystem inoperable for reasons other than Condition ~~C~~D.	~~D~~E.1	Restore Unit 3 DC electrical power subsystem to OPERABLE status.	2 hours

Evaluation of Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition D (Revised and Renumbered as Condition E); Change (4)

The existing Condition D (one unit-specific DC subsystem is inoperable for reasons other than the existing Condition C) would be revised and renumbered as Condition E. The existing Required Action D.1 would be renumbered as Required Action E.1 with the same CT of 2 hours. The NRC staff finds that the proposed renumbering of Condition D and Required Action D.1 as Condition E and Required Action E.1, respectively, is editorial in nature, and is, therefore, acceptable.

The renumbered Condition E would apply when one unit-specific DC subsystem is inoperable for reasons other than the proposed renumbered Condition D (from Section 3.2.3 of this SE). As discussed in Section 3.2.3 of this safety evaluation, the proposed renumbered Condition D is consistent with the existing Condition C. The NRC staff finds that the proposed revised and renumbered Condition E remains consistent with the existing Condition D and is, therefore, acceptable.

Based on the above, the NRC staff concludes that the proposed revised and renumbered Condition E, with its associated Required Action and CT, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.2.5 Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition E (Revised and Renumbered as Condition F); Change (5)

Current Peach Bottom, Units 2 and 3 TS 3.8.4 Condition E with associated Required Actions E.1, E.2, and CTs state:

E. Required Action and Associated Completion Time of Condition A, B, C, or D not met.	E.1	Be in MODE 3.	12 hours
	AND		
	E.2	Be in MODE 4.	36 hours

Revised and renumbered Peach Bottom, Units 2 and 3 TS 3.8.4 Condition F with associated Required Actions F.1, F.2, and CTs would state:

~~E~~F. Required Action and Associated Completion Time of Condition A, B, C, D, or E not met.	~~E~~F.1	Be in MODE 3.	12 hours
	AND		
	~~D~~E.2	Be in MODE 4.	36 hours

Evaluation of Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition E (Revised and Renumbered as Condition F); Change (5)

The existing Condition E (Required Action and associated CT of the existing Condition A, B, C, or D not met) would be revised and renumbered as Condition F. The NRC staff finds that the proposed renumbering of Condition E as Condition F is editorial in nature, and is, therefore, acceptable.

The revised and renumbered Condition F would apply when the Required Action and associated CT of the Condition A (existing A), B (new), C (revised existing B), D (revised existing C), or E (revised existing D) would not be met. The NRC staff finds that the revised and renumbered Condition F reflects the addition of the proposed new Condition B (from Section 3.2.1 of this safety evaluation) to the Peach Bottom, Units and 3 TS 3.8.4, and is, therefore, acceptable.

The existing Required Actions E.1 and E.2 would be renumbered as Required Actions F.1 and F.2, respectively. The renumbered Required Actions F.1 and F.2 would require the unit to be brought to MODE 3 in 12 hours and MODE 4 in 36 hours, respectively, if a Required Action and associated CT for the new Condition B could not be met. The Conditions A, B, C, D, and E referenced in the renumbered Condition F are related to the inoperability of the DC electrical subsystem. If the inoperable DC electrical subsystem cannot be restored to operable status within the required CT, the current Peach Bottom TS 3.8.4 (existing Condition E) requires the unit to be brought to MODE 3 in 12 hours to allow time to perform the necessary repairs to restore the system to operable status and to shutdown MODE 4 in 36 hours. Therefore, the NRC staff finds that the renumbered Required Actions F.1 and F.2 and associated CTs are acceptable since they are consistent with the current Peach Bottom TS requirements for not restoring an inoperable DC electrical subsystem within the required CT.

Based on the above, the NRC staff concludes that the proposed revised and renumbered Condition F, with its associated Required Actions and CTs, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.2.6 Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition F (Renumbered as Condition G); Change (6)

Current Peach Bottom, Units 2 and 3 TS 3.8.4 Condition F with associated Required Action and CT state:

F. Two or more inoperable DC electrical power subsystems.	F.1	Enter LCO 3.0.3.	Immediately

Renumbered Peach Bottom, Units 2 and 3 TS 3.8.4 Condition G with associated Required Action and CT would state:

~~F~~G. Two or more inoperable DC electrical power subsystems.	~~F~~G.1	Enter LCO 3.0.3.	Immediately

Evaluation of Peach Bottom, Units 2 and 3 TS 3.8.4; Current Condition F (Renumbered as Condition G); Change (6)

The licensee proposed to renumber current Condition F and Required Action F.1 to Condition G and Required Action G.1, respectively, with the same CT of "Immediately." The NRC staff finds that the proposed renumbering of Condition F and Required Action F.1 as Condition G and Required Action G.1, respectively, is editorial in nature, and is, therefore, acceptable.

Based on the above, the NRC staff concludes that the proposed renumbered Condition G, with its associated Required Action and CT, provides acceptable remedial actions as allowed by 10 CFR 50.36(c)(2) to ensure that the required DC electrical power subsystems are capable of performing their safety functions, and is, therefore, acceptable.

3.3 Summary and Conclusion

Based on the above evaluation, the NRC staff finds that the proposed changes to the Peach Bottom, Units 2 and 3, TS 3.8.4 based on TSTF-500, Revision 2, provide assurance of the continued availability of the DC power systems required to shut down the reactor and to maintain the reactor in a safe condition after an anticipated operational occurrence or a postulated design-basis accident. The NRC staff also finds that the proposed TS changes to the Peach Bottom, Units 2 and 3, DC electrical power systems continue to meet the requirements of 10 CFR 50.36, and as such, the Peach Bottom, Units 2 and 3, DC electrical power systems will continue to meet the intent of the AEC proposed GDC 24 and GDC 39 following implementation of the TSTF-500, Revision 2. Therefore, the NRC staff concludes that the proposed changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the NRC notified the Pennsylvania State official of the proposed issuance of the amendments on October 15, 2019. The official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components 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 published in the *Federal Register* on August 13, 2019 (84 FR 40096). 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: A. Foli
T. Sweat

Date: December 17, 2019

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - ISSUANCE OF AMENDMENT NOS. 329 AND 332 REGARDING THE ADOPTION OF TSTF-500, "DC ELECTRICAL REWRITE – UPDATE TO TSTF-360" (EPID L-2019-LLA-0118) DATED DECEMBER 17, 2019

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