Exelon Generation

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10 CFR 50.90

August 29, 2019

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Subject: Response to Request for Additional Information (RAI-1)
License Amendment Request to Revise Technical Specifications 3.8.4, DC Sources-Operating

References:
1. Exelon Letter to the NRC, "License Amendment Request to Revise Technical Specifications 3.8.4, DC Sources-Operating," dated June 7, 2019 (ADAMS Accession No. ML19158A312)
2. NRC Email to Exelon, "Peach Bottom Units 2 and 3 - Request for Additional Information - TSTF-500 Implementation LAR (EPID L-2018-LLA-0265)," dated August 20, 2019 (ADAMS Accession No. ML19232A175)

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) proposed a change to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 (Reference 1). The proposed change would revise TS 3.8.4, "DC Sources - Operating," to add a Condition for the opposite Unit consistent with Technical Specifications Task Force (TSTF)-500, Revision 2, "DC [direct current] Electrical Rewrite – Update to TSTF-360," as approved by the Nuclear Regulatory Commission (NRC). Specifically, the proposed Condition would allow a 72-hour Completion Time for an opposite Unit battery charger that is required for particular plant configurations.

During their technical review of the application, the NRC staff identified the need for additional information (Reference 2).

The Attachment to this letter provides a restatement of the question cited in Reference 2 followed by Exelon's response.

Exelon has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in Attachment 1 of the Reference 1 letter. Exelon has concluded that the information provided in this response does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92. In addition, Exelon has concluded that the information in this response does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

There are no regulatory commitments contained in this response.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the Commonwealth of Pennsylvania of this response by transmitting a copy of this letter to the designated State Official.

Should you have any questions concerning this response, please contact Mr. Frank J. Mascitelli at (610) 765-5512.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 29th day of August 2019.

Respectfully,

David P. Helker
Sr. Manager, Licensing
Exelon Generation Company, LLC

Attachment: Response to Request for Additional Information (RAI-1), License Amendment Request to Revise Technical Specifications 3.8.4, DC Sources-Operating

cc:	Regional Administrator - NRC Region I	w/ attachments
	NRC Senior Resident Inspector - PBAPS	"
	NRC Project Manager, NRR - PBAPS	"
	R. R. Janati, Pennsylvania Bureau of Radiation Protection	"
	D. A. Tancabel, State of Maryland	"

ATTACHMENT

License Amendment Request

Peach Bottom Atomic Power Station, Units 2 and 3
Docket Nos. 50-277 and 50-278

Response to Request for Additional Information (RAI-1)
License Amendment Request to Revise Technical Specifications 3.8.4, DC Sources-Operating

Response to NRC Staff's
Request for Additional Information

By application dated June 7, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19158A312), Exelon Generation Company, LLC (Exelon) requested an amendment to the Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The license amendment request (LAR) would revise the Technical Specifications (TS) 3.8.4, "DC Sources - Operating," to add a Condition for the opposite Unit consistent with Technical Specifications Task Force (TSTF)-500, Revision 2, "DC [direct current] Electrical Rewrite – Update to TSTF-360," (ADAMS Accession No. ML092670242) as approved by the Nuclear Regulatory Commission (NRC).

Specifically, the proposed Condition would allow a 72-hour Completion Time (CT) for an opposite Unit battery charger that is required for particular plant configurations. Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR 50), Section 36, "Technical Specifications," requires, in part, that the operating license of a nuclear production facility include TS. 10 CFR 50.36 (c)(2) requires that the TS include limiting conditions for operation (LCOs) which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

Below is a restatement of the question cited in Reference 2 of the cover letter followed by Exelon's response.

RAI -1 Question

The licensee proposed a new TS 3.8.4 Condition B with associated Required Actions and Completion Times (CT) for the required opposite unit battery charger. The licensee stated that the word "required" denotes that only specific batteries from the opposite unit are required to support operation of the unit for particular plant configurations.

The proposed new Unit 2 TS 3.8.4 Condition B with associated Required Actions and CT 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. AND B.2 Verify battery float current ≤ 2 amps. AND B.3 Restore battery charger to OPERABLE status.	12 hours Once per 12 hours 72 hours

The proposed new Unit 3 TS 3.8.4 Condition B with associated Required Actions and CT would state:

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

The NRC staff has identified the following discrepancy:

Both the 12 hour-CT for Required Action B.1 and the initial 12-hour CT for Required Action B.2 start when Condition B is entered. If the battery terminal voltage was restored to greater than or equal to the minimum established float voltage within 12 hours (Required Action B.1), the battery would be on the exponential charging current portion of its recharging cycle at the end of the 12 hours. It appears that there would be no time remaining for the battery charging current to decrease to less than or equal to 2 amperes (amps) within the same 12 hours (i.e., initial 12-hour CT for Required Action B.2).

The staff requests the following information to address this discrepancy:

Provide a discussion to demonstrate that the required battery can be fully recharged with a charging current of less than 2 amps within the initial 12 hours from entry into Condition B (Required Action B.2) after the required battery terminal voltage is restored to greater than or equal to the minimum established float voltage at the end of 12 hours from entry into Condition B (Required Action B.1).

Response

The required battery cannot be fully recharged with a charging current of less than 2 amps within the initial 12 hours from entry into Condition B (Required Action B.2) after the required battery terminal voltage is restored to greater than or equal to the minimum established float voltage at the end of 12 hours from entry into Condition B (Required Action B.1). This condition had been recognized during development of the LAR. Exelon did not pursue additional calculations or analysis to provide a CT for Required Action B.2 that exceeded the analysis that had been provided in TSTF-500, Revision 2, "DC [direct current] Electrical Rewrite – Update to TSTF-360." For the above condition to occur, both the on-line and standby safety related battery chargers, as well as the permanently installed alternate non-safety related battery charger, would have had to fail. The alternate battery charger has been designed and will be operated in a manner to be available within approximately two hours to start charging the battery that may have experienced a discharging condition due to failure of the on-line and standby battery chargers. The condition of all three battery chargers failing concurrently was judged to be of such low probability that it did not justify the additional effort to support an extended CT beyond the 12 hours for the battery to be fully recharged with a charging current of less than 2 amps. Exelon acknowledges that if such a condition did occur and the proposed LCO 3.8.4.B Required Action B.2 could not be met, the proposed LCO 3.8.4 Condition F would be entered and the associated Unit would be required to be in Mode 3 within 12 hours and Mode 4 within 36 hours.