

From: [Tobin, Jennifer](#)
To: ["Helker, David P.\(GenCo-Nuc\)"](#)
Cc: ["Mascitelli, Francis J.\(GenCo-Nuc\)"; "Gropp, Jr, Richard W.\(GenCo-Nuc\)"](#)
Subject: Peach Bottom Units 2 and 3 - Request for Additional Information - Adopt TSTF-500 Battery TS Changes LAR (EPID L-2017-LLA-0312)
Date: Tuesday, August 14, 2018 3:50:00 PM
Attachments: [Peach Bottom Draft RAIs TSTF500.docx](#)

Dear Mr. Helker,

By letter dated September 29, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17275A069), Exelon Generation Company, LLC (EGC, the licensee) requested changes to the Technical Specifications (TSs) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force (TSTF) 500, Revision 2, "DC [direct current] Electrical Rewrite – Update to TSTF 360." The License Amendment Request (LAR) proposes to revise TS requirements related to DC electrical power systems in TS limiting condition for operation (LCO) 3.8.4, "DC Sources - Operating," LCO 3.8.5, "DC Sources - Shutdown," and LCO 3.8.6, "Battery Cell Parameters." A new "Battery Monitoring and Maintenance Program" is being proposed for TS 5.5, "Programs and Manuals."

The Nuclear Regulatory Commission's (NRC) staff is reviewing your submittal and has determined that additional information is needed to complete its review. The specific request for additional information (RAI) questions are provided below. A clarification phone call will be held if needed. A response to these RAIs is requested by September 14, 2018.

If you have any questions, please contact me at (301) 415-2328. A copy of this e-mail will be made publicly available in ADAMS.

Thanks,
Jenny

Jenny Tobin
Project Manager
NRR/DORL/LPL-1
Office O9-C12 Phone 301-415-2328

REQUEST FOR ADDITIONAL INFORMATION
OFFICE OF THE NUCLEAR REACTOR REGULATION
LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS
TO ADOPT TECHNICAL SPECIFICATION TASK FORCE
(TSTF) -500, REVISION 2.
"DC ELECTRICAL REWRITE – UPDATE TO TSTF-360"
EXELON GENERATION
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3
NRC DOCKET NOS. 050-277 AND 050-278

By application dated September 29, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17275A069), Exelon Generation Company, LLC (EGC, the licensee) requested changes to the Technical Specifications (TSs) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force (TSTF) -500, Revision 2, "DC [direct current] Electrical Rewrite – Update to TSTF-360." The License Amendment Request (LAR) proposes to revise TS requirements related to DC electrical power systems in TS limiting condition for operation (LCO) 3.8.4, "DC Sources - Operating," LCO 3.8.5, "DC Sources - Shutdown," and LCO 3.8.6, "Battery Cell Parameters." A new "Battery Monitoring and Maintenance Program" is being proposed for TS 5.5, "Programs and Manuals."

EEOB RAI -1

Regulatory Requirement

1. Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR 50)

The regulation at Appendix A to 10 CFR 50, General Design Criterion (GDC) 17, "Electric power systems," states, in part, that:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety....

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

2. The regulation at 10 CFR Part 50, Appendix A, GDC 18, "Inspection and testing of electric power systems," states, in part, that "[e]lectric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features.

EEOB RAI-1

Attachment 2 of the LAR discusses TS 3.8.4 new Condition D., current Condition C. (revised and renumbered to Condition E.), associated Required Actions and CTs for Required Actions.

Additionally, in Section 2.2.5 in Attachment 1 of the LAR, the licensee states, "PBAPS will not be requesting a Completion Time longer than 2 hours for an inoperable battery or greater than 2 hours for an inoperable DC subdivision for other reasons than an inoperable battery or inoperable battery charger."

The Reviewer Note for TSTF Section 3.8.4 Required Action B.1.2 stated that Condition B (D in LAR) is included if Required Action B.1 (D.1 in LAR) (One [or two] batter[y][ies on one subsystem] inoperable) and Required Action C.1 (E.1 in LAR) (One DC electrical power subsystem inoperable for reasons other than Condition A [or B]), (C [or D in LAR]) would have different Completion Times. If the plant design supports different Completion Times when a battery is inoperable but the charger is OPERABLE, then Condition B (D in LAR) is used. If not, Condition B (D in LAR) is deleted and only Condition C (E in LAR) is used."

Since Section 2.2.5 in Attachment 1 of LAR stated that PBAPS would like to keep the same (2 hours) Completion Time for both Required Action D.1 for an inoperable battery and Required Action E.1 for an inoperable DC subdivision for other reasons than an inoperable battery or inoperable battery charger, the proposed CONDITION D, Required Action D.1 and CT for Required Action D.1 appears to be duplicative.

Further, the proposed new Condition D (one battery on one subsystem inoperable) in the LAR would be acceptable if the new Condition D and revised Condition E (one unit 2/3 DC electrical power subsystem inoperable) have different CTs. But the proposed Condition D and revised Condition E have the same CTs (2 hours), which means that the new Condition D should not be adopted.

The NRC staff requests the licensee to provide justification for deviation from the TSTF-500, Revision 2 for adoption of new Condition D with same CTs (2 hours) for new Required Actions D.1 and E.1.

EEOB RAI -2

Regulatory Requirement

1. Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR 50)

The regulation at Appendix A to 10 CFR 50, General Design Criterion (GDC) 17, "Electric power systems," states, in part, that:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

2. The regulation at 10 CFR Part 50, Appendix A, GDC 18, "Inspection and testing of electric power systems," states, in part, that "[e]lectric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features...."

TS Section 5.5.15.b.2, Battery Monitoring and Maintenance Program in Attachment 2 of the LAR states, "Actions to determine whether the float voltage of the remaining battery cells is = 2.07 V when the float voltage of a battery cell has been found to be < 2.13 V." However, TS 5.5.14.b.2, "Battery Monitoring and Maintenance Program," of TSTF-500, Revision 2 states, "Actions to determine whether the float voltage of the remaining battery cells is = [2.13] V when the float voltage of a battery cell has been found to be < [2.13] V."

There appears to be a discrepancy between TSTF-500 recommended float voltage = [2.13] V limit and the LAR recommended = 2.07 limit in the proposed TS Section 5.5.15.b.2, Battery Monitoring and Maintenance Program.

Please provide a discussion explaining the discrepancy between = 2.07 V in the LAR and TSTF-500 recommended float voltage = [2.13] V limit in the proposed TS Section 5.5.15.b.2, Battery Monitoring and Maintenance Program.