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December 20, 2017

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 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: Supplemental Response Concerning License Amendment Request to Revise Technical Specifications to Adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2

References:

1) Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – Application to Revise Technical Specifications to Adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, dated January 30, 2017 (ML17030A302)

2) U.S. Nuclear Regulatory Commission Electronic Mail Message from R. B. Ennis to Richard Gropp (Exelon Generation Company, LLC) – Peach Bottom Units 2 and 3 - Request for Additional Information - TSTF-542 Amendment Request (CACs MF9138 and MF9139), dated August 2, 2017 (ML17214A616)

3) Letter from David T. Gudger (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – Response to Request for Additional Information to Revise Technical Specifications to Adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, dated August 11, 2017 (ML17223A626)

4) Letter from David P. Helker (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – Supplemental Response to Request for Additional Information to Revise Technical Specifications to Adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, dated September 8, 2017 (ML17251A855)

5) Electronic mail message from Lisa Williams (Boiling Water Reactor Owners Group (BWROG), Licensing Committee Chairman (TSTF Committee)) to BWROG Members – "TSTF-542 issue re: NUREG-1433 Reactor Steam Dome Pressure – Low," dated December 14, 2017

By letter dated January 30, 2017, (Reference 1), Exelon Generation Company, LLC, (Exelon) submitted a License Amendment Request (LAR) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, requesting changes to the Technical Specifications (TS) requirements related to Operations with a Potential for Draining the Reactor Vessel (OPDRVs) with new requirements on Reactor Pressure Vessel Water Inventory Control (RPV WIC) to protect Safety Limit 2.1.1.3. Safety Limit 2.1.1.3 requires reactor vessel water level to be greater than the top of active irradiated fuel. The requested TS changes were submitted based on Technical Specifications Task Force (TSTF) Traveler TSTF-542, *"Reactor Pressure Vessel Water Inventory Control,"* Revision 2.

In an electronic mail message dated August 2, 2017 (Reference 2), the NRC issued a Request for Additional Information (RAI) regarding the PBAPS TSTF-542 LAR, in which Exelon responded by letter dated August 11, 2017 (Reference 3). Exelon also submitted supplemental information in support of the proposed LAR in a letter dated September 8, 2017 (Reference 4).

Subsequently, in an electronic mail message distributed to Boiling Water Reactor Owners Group (BWROG) members dated December 14, 2017 (Reference 5), Exelon was informed by the BWROG/TSTF Committee of an administrative oversight in the TSTF-542 TS mark-ups for the model application, in that a note was inadvertently omitted from NUREG-1433 Table 3.3.5.2-1 Functions 1.a and 2.a. Without the note, the Reactor Steam Dome Pressure – Low functions are required to be operable for all low pressure Emergency Core Cooling System (ECCS) subsystems, regardless of whether they are credited for meeting applicable TS for reactor pressure vessel water inventory control.

Prior to the model application for TSTF-542, NUREG-1433 Functions 1.c and 2.c in TS Table 3.3.5.1-1 had a Mode 4 and 5 applicability modified by a note specifying that these functions were only required when the associated ECCS were required to be operable per Limiting Condition for Operation (LCO) 3.5.2, "ECCS Shutdown." In the model application for TSTF 542, Functions 1.c and 2.c were transferred to Table 3.3.5.2-1 as Functions 1.a and 2.a; however, the note was not transferred with these functions although the applicable TS Bases indicates that it had been. For the PBAPS submittal, this information is included in TS Table 3.3.5.4-1, "RPV Water Inventory Control Instrumentation," as depicted in the excerpt below.

Table 3.3.5.4-1 (page 1 of 1)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Pressure—Low (Injection Permissive)	4,5	4	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Core Spray Pump Discharge Flow—Low (Bypass)	4,5	1 per pump (a)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 319.0 psid and ≤ 351.0 psid
c. Manual Initiation	4,5	1 per subsystem (a)	D	SR 3.3.5.4.3	NA

2. Low Pressure Coolant Injection (LPCI) System						
a. Reactor Pressure–Low (Injection Permissive)	4,5	4	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	4,5	1 per pump (a),(c)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 299.0 psid and ≤ 331.0 psid

Without the footnote, Reactor Steam Dome Pressure – Low functions (i.e., Functions 1.a and 2.a) are required to be operable for all low pressure ECCS subsystems, regardless of whether the subsystems are credited to meet applicable TS. In Modes 4 and 5, these functions only serve to allow opening of the ECCS injection valves. Since reactor pressure is at atmospheric pressure in Modes 4 and 5, the functions are not needed to protect low pressure piping from excessive pressure. Requiring the functions for all ECCS subsystems is unnecessary.

Accordingly, the attachment contains copies of the revised TS page mark-ups for PBAPS, Units 2 and 3, that reflect the incorporation of the missing note for Functions 1.a and 2.a in Table 3.3.5.4-1.

Exelon has reviewed the information supporting a finding of No Significant Hazards Consideration and the Environmental Consideration provided to the NRC in the Reference 1 letter. The supplemental information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the supplemental information provided in this submittal 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 submittal.

If you have any questions or require additional information, please contact Richard Gropp at (610) 765-5557.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 20th day of December 2017.

Respectfully,

D. P. Helker

David P. Helker
Manager, Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Updated Technical Specifications Page Mark-ups

cc: w/ Attachment
NRC Region I, Regional Administrator
NRC Project Manager, NRR - Peach Bottom
NRC Senior Resident Inspector - Peach Bottom
S. T. Gray, State of Maryland
R. R. Janati, Bureau of Radiation Protection, Commonwealth of Pennsylvania

ATTACHMENT

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

NRC Docket Nos. 50-277 and 50-278

Renewed Facility Operating License Nos. DPR-44 and DPR-56

Supplemental Response
License Amendment Request
Application to Revise TS to Adopt TSTF-542

Updated Technical Specifications Page Mark-ups

Unit 2	Unit 3
3.3-47d	3.3-47d

Table 3.3.5.4-1 (page 1 of 1)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Pressure—Low (Injection Permissive)	4,5	4 (a)	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Core Spray Pump Discharge Flow—Low (Bypass)	4,5	1 per pump (a)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 319.0 psid and ≤ 351.0 psid
c. Manual Initiation	4,5	1 per subsystem (a)	D	SR 3.3.5.4.3	NA
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Pressure-Low (Injection Permissive)	4,5	4 (a)	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	4,5	1 per pump (a),(c)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 299.0 psid and ≤ 331.0 psid
c. Manual Initiation	4,5	1 per subsystem (a)	D	SR 3.3.5.4.3	NA
3. RHR System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(b)	2	B	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 1.0 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(b)	2	B	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 1.0 inches

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.4, "Reactor Pressure Vessel Water Inventory Control."

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.

Table 3.3.5.4-1 (page 1 of 1)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Pressure—Low (Injection Permissive)	4,5	4 (a)	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Core Spray Pump Discharge Flow—Low (Bypass)	4,5	1 per pump (a)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 319.0 psid and ≤ 351.0 psid
c. Manual Initiation	4,5	1 per subsystem (a)	D	SR 3.3.5.4.3	NA
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Pressure-Low (Injection Permissive)	4,5	4 (a)	C	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 425.0 psig and ≤ 475.0 psig
b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	4,5	1 per pump (a),(c)	D	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 299.0 psid and ≤ 331.0 psid
c. Manual Initiation	4,5	1 per subsystem (a)	D	SR 3.3.5.4.3	NA
3. RHR System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(b)	2	B	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 1.0 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(b)	2	B	SR 3.3.5.4.1 SR 3.3.5.4.2	≥ 1.0 inches

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.4, "Reactor Pressure Vessel Water Inventory Control."

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.