

From: [Tobin, Jennifer](#)
To: ["Helker, David P:\(GenCo-Nuc\)"](#)
Cc: ["Gropp Jr, Richard W:\(GenCo-Nuc\)"](#)
Subject: Peach Bottom Units 2 and 3 - Request for Additional Information - Secondary Containment LAR (EPID L-2018-LLA-0264)
Date: Friday, January 25, 2019 4:58:00 PM

Dear Mr. Helker,

By letter dated September 27, 2018 (Accession No. ML18271A009), Exelon Generation Company, LLC requested to change technical specifications for Peach Bottom Atomic Power Station Units 2 and 3. The proposed change would modify TSs to help alleviate scheduling difficulties associated with reactor building and refueling floor ventilation system.

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. These questions are being sent to ensure that the questions are understandable, the regulatory basis for the questions is clear, and to determine if the information was previously docketed. A clarification phone call to discuss the draft RAIs was held January 24, 2019, and both RAIs were clarified as a result of the call. A 30-day response time was agreed upon so please provide your response to the RAIs by February 25, 2019.

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

Thanks,
Jenny

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REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
FOR A LICENSE AMENDMENT REQUEST TO REVISE THE APPLICABILITY OF
FUNCTIONS 3 AND 4 IN TECHNICAL SPECIFICATIONS 3.3.6.2
EXELON GENERATION COMPANY LLC
PEACH BOTTOM ATOMIC POWER STATION UNITS 2 AND 3
DOCKET NUMBERS 50-277 AND 50-278
ENTERPRISE PROJECT IDENTIFIER L-2018-LLA-0264

By letter dated September 27, 2018, Exelon Generation Company LLC, the licensee, proposes to change technical specifications for Peach Bottom Atomic Power Station Units 2

and 3 (Peach Bottom). The proposed change would modify the applicability for technical specifications 3.3.6.2, functions 3 and 4. Specifically, function 3 (reactor building ventilation exhaust radiation - high) would be revised to only be required when function 4 (refueling floor ventilation exhaust radiation - high) is not maintained, and function 4 would be revised to only be required when function 3 is not maintained. Additionally, this change clarifies which standby gas treatment (SGT) subsystems are required to be put into operation or declared inoperable as described in TS 3.3.6.2 condition C for required actions C.2.1 and C.2.2.

During the Nuclear Regulatory Commission (NRC) staff's review of the license amendment request, the NRC staff determined that more information was needed to complete the review.

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.67, "Accident Source Term," allows licensees seeking to revise their current accident source term in design basis radiological consequence analyses to apply for a license amendment under § 50.90. The application shall contain an evaluation of the consequences of applicable design basis accidents previously analyzed in the safety analysis report. Section 50.67(b)(2) requires that the licensee's analysis demonstrates with reasonable assurance that:

- (i) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 0.25 Sv (25 rem) total effective dose equivalent (TEDE).
- (ii) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage), would not receive a radiation dose in excess of 0.25 Sv (25 rem) TEDE.
- (iii) Adequate radiation protection is provided to permit access to and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 0.05 Sv (5 rem) TEDE for the duration of the accident.

10 CFR 50.36, "Technical Specifications," in part, requires that the technical specifications be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto and includes items in following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notifications; and (8) written reports.

In the license amendment request the licensee determined that it is acceptable to revise TS 3.3.6.2 functions 3 and 4 applicability as described above in section 2.0 as long as the refuel floor hatch plug remains removed and no other physical obstruction seals the air flow path between the refuel floor and the reactor building. The licensee stated that the absence of the refuel floor hatch cover allows air flow in the spaces between the reactor building and the refuel floor and that for a design basis accident where excessive

radioactive material is released into secondary containment, airborne radioactivity will be drawn down and detected at either the refuel floor exhaust radiation monitors or the reactor building exhaust radiation monitors (whichever set is not isolated) to provide a valid secondary containment isolation signal. The NRC staff agrees that the reactor building and refuel floor air spaces allow air flow when the refuel floor hatch plug is removed. While in this condition, both the refuel floor ventilation exhaust radiation monitor and reactor building ventilation exhaust radiation monitor are able to generate a high radiation secondary containment isolation signal if there is a mechanism to ensure mixing between the reactor building and refuel floor. However, the license amendment request did not discuss if there is a mechanism available in all conditions i.e., normal operations and during a loss of offsite power, to ensure mixing between the reactor building and refuel floor air spaces.

The licensee proposed the addition of footnote (c) to the applicability for TS 3.3.6.2 function 3, *Reactor Building Ventilation Exhaust Radiation – High*, and footnote (d) to the applicability for TS 3.3.6.2 function 4, *Refueling Floor Ventilation Exhaust Radiation - High*. Footnote (c) would state:

Function is only applicable if Function 4 isolation capability is not maintained.

Footnote (d) would state:

Function is only applicable if Function 3 isolation capability is not maintained.

The NRC staff reviewed the proposed TS wording to ensure that the allowance of reducing the required functions to either the reactor building ventilation exhaust radiation function or the refuel floor ventilation exhaust radiation function is only allowed when the refuel floor plug is removed. The proposed TS wording doesn't appear to be limited to when the refuel floor plug is removed and seems to allow reducing the required functions even if the refuel floor plug is installed.

Additionally, the proposed footnotes are worded such that neither function is required by TS 3.3.6.2 during their applicable modes or other specified conditions if isolation capability is maintained. The proposed footnotes seem to essentially negate the requirements for the functions in modes 1, 2, 3 and during movement of recently irradiated fuel assemblies in secondary containment when isolation capability is maintained for both functions.

Because the proposed change to TS 3.3.6.2 is not limited to when the refuel floor plug is removed and essentially seems to negate the function 3 and 4 requirements when isolation capability is maintained for both functions, a revision to the proposed TS change is necessary or a technical evaluation discussing these aspects is needed.

RAI-1

Provide a discussion that explains if there is a mixing mechanism available during all conditions assumed in the licensing basis (i.e., normal operations, during a loss of offsite power, etc.), to ensure mixing between the reactor building and refuel floor air spaces.

In addition, discuss any impacts on the current licensing basis that may result from the mixing and transporting mechanisms with respect to the detector response times for the refuel floor ventilation exhaust and reactor building ventilation exhaust radiation detectors.

This clarification applies to response time delay when the radiation monitor in that affected area is not available and the radiation monitor in the other area is in operation.

RAI-2

Provide a revision to the proposed TS 3.3.6.2 footnotes such that the footnote is: (1) dependent on the refuel floor hatch plug being removed, and (2) identifies that at least one function must be operable during their applicable modes or other specified conditions, either the reactor building ventilation exhaust radiation instrumentation or the refueling floor ventilation exhaust radiation instrumentation, or,

Provide a technical basis for removing these functions from TS 3.3.6.2.