

August 22, 2018

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: Supplemental Information - Application to Adopt 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants"

References:

1. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Application to Adopt 10 CFR 50.69, 'Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants,'" dated August 30, 2017 (ML17243A014)
2. Letter from Richard B. Ennis (U.S. Nuclear Regulatory Commission) to Bryan C. Hanson, Exelon Generation Company, LLC – "Supplemental Information Needed for Acceptance of Requested Licensing Action Re: Adoption of title 10 of the Code of Federal Regulations Section 50.69," dated October 10, 2017 (ML17272B016)
3. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Supplement to Application to Adopt 10 CFR 50.69, Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors," dated October 24, 2017 (ML17297B521)
4. Electronic mail message from Jennifer Tobin (U.S. Nuclear Regulatory Commission) to David Helker, Exelon Generation Company, LLC – "Draft 50.69 Request for Additional Information (RAIs) - Peach Bottom," dated March 21, 2018
5. Electronic mail message from Jennifer Tobin (U.S. Nuclear Regulatory Commission) to David Helker, Exelon Generation Company, LLC – "Peach Bottom Units 2 and 3 - Request for Additional Information - Adopt 50.69 License Amendment," dated April 6, 2018 (ML18096B506)

6. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Response to Request for Additional Information - Application to Adopt 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants," dated May 7, 2018 (ML18128A009)
7. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Supplemental Information to Support Application to Adopt 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants," dated June 6, 2018 (ML18157A260)
8. Electronic mail message from Jennifer Tobin (U.S. Nuclear Regulatory Commission) to David Helker, Exelon Generation Company, LLC – "Peach Bottom Units 2 and 3 - Request for Additional Information 2nd Round - Adopt 50.69 License Amendment," (Draft) dated June 26, 2018
9. Electronic mail message from Jennifer Tobin (U.S. Nuclear Regulatory Commission) to David Helker, Exelon Generation Company, LLC – "Peach Bottom Units 2 and 3 - Request for Additional Information 2nd Round - Adopt 50.69 License Amendment," dated July 10, 2018 (ML18192A119)
10. Electronic mail message from Jennifer Tobin (U.S. Nuclear Regulatory Commission) to David Helker, Exelon Generation Company, LLC – "Peach Bottom Units 2 and 3 - Request for Additional Information 2nd Round - Adopt 50.69 License Amendment," dated July 17, 2018 (ML18200A274)
11. Letter from David T. Gudger (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Response to Request for Additional Information and Supplemental Information - Application to Adopt 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants," dated August 10, 2018 (ML18222A387)

By letter dated August 30, 2017 (Reference 1), 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, respectively. The proposed amendment would modify the licensing basis by the addition of a license condition to allow for the implementation of the provisions of Title 10 of the Code of Federal Regulations (10 CFR), Part 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power reactors." In a letter dated October 10, 2017 (Reference 2), the U.S. Nuclear Regulatory Commission (NRC) requested that Exelon provide supplemental information in support of the application. By letter dated October 24, 2017 (Reference 3), Exelon responded to the NRC's request for supplemental information.

The NRC reviewed the information provided in the Reference 1 and 2 submittals and indicated the need for additional information in order to complete their review and evaluation of the amendment request. In an electronic mail message dated March 21, 2018 (Reference 4), the NRC issued a draft Request for Additional Information (RAI). This draft RAI was the subject of further discussions during a teleconference on April 6, 2018, between Exelon and NRC representatives and additional clarification was provided. The NRC formally issued the RAI on April 6, 2018 (Reference 5), and Exelon responded to the RAI by letter dated May 7, 2018 (Reference 6). By letter dated June 6, 2018 (Reference 7), Exelon provided supplemental information in support of the proposed license amendment request to adopt 10 CFR 50.69.

Subsequently, in an electronic mail message dated June 26, 2018 (Reference 8), the NRC issued a second RAI (draft) that was the subject of discussions during a teleconference on July 10, 2018, between Exelon and NRC representatives. The NRC formally issued the RAI via electronic mail message dated July 10, 2018 (Reference 9), and requested a response by August 10, 2018. This RAI was supplemented via a subsequent electronic mail message dated July 17, 2018 (Reference 10), to provide additional clarifying information to one of the questions.

By letter dated August 10, 2018 (Reference 11), Exelon responded to the RAI questions cited in References 9 and 10. During a subsequent teleconference between Exelon and NRC representatives held on August 16, 2018, to further discuss the response, Exelon agreed to provide supplemental information in support of the response to RAI Question RAI 08.d.01, "Follow-up to Licensee Response to NRC RAI 08.d regarding the RCIC and HPCI Turbine Failure Probabilities." The following additional information is provided to further substantiate the response to RAI Question RAI 08.d.01:

Given that the importance results are not insensitive to the failure probability assigned in the Probabilistic Risk Assessment (PRA) for unrecoverable failure of the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) turbines with the current modeling, and there is not substantial failure data available, this failure will be treated as a key source of model uncertainty for 50.69 categorization. In addition to the list of required categorization sensitivities in Tables 5-2 and 5-3 of NEI 00-04, a sensitivity increasing this failure probability by a factor of 10 will be performed for both the internal events PRA and the fire PRA. The results will be presented to the Integrated Decision-Making Panel (IDP) along with the PRA and PRA sensitivity results during the IDP's considerations of categorization. Treatment of this parameter as a key uncertainty for this application may be reconsidered in the future if new data become available regarding this HPCI/RCIC turbine failure mechanism.

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.

As described in the attachment to this submittal, Exelon is committing to complete the additional actions noted above in support of the implementation of the requested amendment once approved.

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

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 22nd day of August 2018.

Respectfully,



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

Attachment: Summary of Regulatory Commitments

cc: w/ Attachment
Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station
NRC Project Manager, NRR - Peach Bottom Atomic Power Station
Director, Bureau of Radiation Protection – Pennsylvania Department
of Environmental Protection
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**

**Supplemental Information - Application to Adopt 10 CFR 50.69,
"Risk-informed categorization and treatment of structures, systems, and
components for nuclear power plants"**

Summary of Regulatory Commitments

SUMMARY OF REGULATORY COMMITMENTS

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

Commitment	Committed Date or "Outage"	Commitment Type	
		One-Time Action (Yes/No)	Programmatic (Yes/No)
Given that the importance results are not insensitive to the failure probability assigned in the Probabilistic Risk Assessment (PRA) for unrecoverable failure of the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) turbines with the current modeling, and there is not substantial failure data available, this failure will be treated as a key source of model uncertainty for 50.69 categorization. In addition to the list of required categorization sensitivities in Tables 5-2 and 5-3 of NEI 00-04, a sensitivity increasing this failure probability by a factor of 10 will be performed for both the internal events PRA and the fire PRA. The results will be presented to the Integrated Decision-Making Panel (IDP) along with the PRA and PRA sensitivity results during the IDP's considerations of categorization. Treatment of this parameter as a key uncertainty for this application may be reconsidered in the future if new data become available regarding this HPCI/RCIC turbine failure mechanism.	Upon implementation of approved amendment.	No	Yes