



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 8, 2011

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNIT 3 - REQUEST FOR
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT
REQUEST FOR SAFETY LIMIT MINIMUM CRITICAL POWER RATIO CHANGE
(TAC NO. ME6931)

Dear Mr. Pacilio:

By letter to the Nuclear Regulatory Commission (NRC) dated June 8, 2011, as supplemented by letter dated August 19, 2011,¹ Exelon Generation Company, LLC, (Exelon) submitted a License Amendment Request for Peach Bottom Atomic Power Station (PBAPS), Unit 3. The submittal seeks to revise Technical Specification 2.1.1, "Reactor Core SLs [safety limits]" to reflect revised Safety Limit Minimum Critical Power Ratio (SLMCPR) values for Operating Cycle 19. The NRC staff has reviewed the request submitted by the licensee and determined that additional information is needed as set forth in the Enclosure.

The draft questions were sent to Mr. Thomas Loomis, of your staff, to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. On September 6, 2011, Mr. Loomis indicated that the licensee will submit a response by September 16, 2011. Please note that if you do not respond to this letter by the agreed-upon date or provide an acceptable alternate date in writing, we may reject your application for amendment under the provisions of Title 10 of the *Code of Federal Regulations*, Section 2.108.

If you have any questions, please contact John Hughey at (301) 415-3204.

Sincerely,

A handwritten signature in black ink that reads "John D. Hughey".

John D. Hughey, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-278

Enclosure:
Request for Additional Information

cc: Distribution via ListServ

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML111600180 and ML112340236, respectively.

REQUEST FOR ADDITIONAL INFORMATION RELATED TO
LICENSE AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION CHANGES
TO SAFETY LIMIT MINIMUM CRITICAL POWER RATIO VALUES
PEACH BOTTOM ATOMIC POWER STATION – UNIT 3
DOCKET NO. 50-278

By letter to the Nuclear Regulatory Commission (NRC) dated June 8, 2011,¹ as supplemented by letter dated August 19, 2011,² Exelon Generation Company, LLC, (Exelon) submitted a License Amendment Request for Peach Bottom Atomic Power Station, Unit 3. The submittal seeks to revise Technical Specification 2.1.1, "Reactor Core SLs [safety limits]" to reflect revised Safety Limit Minimum Critical Power Ratio (SLMCPR) values for operating cycle 19. The NRC staff has reviewed Exelon's response to the NRC Request for Additional Information (RAI) dated August 19, 2011,² and determined that additional information, as described below, is needed to complete the review.

- RAI-08: Identify the sections/pages of Reference 02-1: Global Nuclear Fuel, "General Electric Standard Application for Reactor Fuel (GESTAR II)," NEDE-24011P-A-18 and NEDE-24011P-A-18-US, April 2011, that are applicable to the inputs identified in the response to RAI-02.² In addition, provide a quantitative range for the referenced thermal limit margins and the reactivity margins.
- RAI-09: Identify the sections/pages of Reference 03-1: Global Nuclear Fuel, "General Electric Standard Application for Reactor Fuel (GESTAR II)," NEDE-24011P-A-18 and NEDE-24011P-A-18-US, April 2011, that describe the SLMCPR calculation related to GNF2 fuel assemblies as discussed in the response to RAI-03.²
- RAI-10: Provide the calculation details requested in RAI-05.^{1,2} that justify the results listed in Table 3 of Attachment 4 from the June 8, 2011, submittal.³
- RAI-11: Explain why the backup stability protection depicted in the power flow operation map contained in Attachment 6 of the June 8, 2011,¹ submittal extends beyond the applicable region.
- RAI-12: Provide the backup stability protection for single loop operation in the power/flow map presented in Attachment 6 of the June 8, 2011,¹ submittal.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML111600180.

² ADAMS Accession No. ML112340236.

³ Note that the "Attachment 4" referenced in RAI-10 is the non-publicly available, proprietary version of Attachment 5 associated with the submittal dated June 8, 2011 (ADAMS Accession No. ML111600180).

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Sincerely,

/ra/

John D. Hughey, Project Manager
Plant Licensing Branch I-2
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*via email

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DATE	09/08/2011	09/06/2011	09/08/2011	09/08/2011

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