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

March 8, 2013

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

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3, ACCEPTANCE REVIEW REGARDING PROPOSED EXTENDED POWER UPRATE (TAC NOS. ME9631 AND ME9632)

Dear Mr. Pacilio:

By letter dated September 28, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML122860201), Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The proposed amendment would authorize an increase in the maximum power level from 3514 megawatts thermal (MWt) to 3951 MWt. The requested change, referred to as an extended power uprate (EPU), represents an increase of approximately 12.4 percent above the current licensed thermal power level.

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information, in scope and depth, to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

By letter dated December 18, 2012 (ADAMS Accession No. ML12312A443), the NRC staff notified Exelon of specific supplemental information that needed to be submitted to enable the staff to begin its detailed review. By letter dated February 15, 2013 (ADAMS Accession No. ML13051A032), Exelon provided the supplemental information.

The NRC staff has reviewed the supplemental information and concluded that it does provide technical information in sufficient detail to enable the staff to proceed with its detailed technical review and make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment. Given the lesser scope and depth of the acceptance review as compared to the detailed technical review, there may be instances in which issues that impact the NRC staff's ability to complete the detailed technical review are identified despite completion

of an adequate acceptance review. You will be advised of any further information needed to support the NRC staff's detailed technical review by separate correspondence.

Your application dated September 28, 2012, requested that the NRC staff complete its review by June 30, 2014. While the NRC staff will endeavor to meet this date, we note that the timeliness performance goal for EPU reviews is 18 months from the date of acceptance of the application for review (i.e., 18 months from the date of this letter). The timeliness goals for power uprate reviews is discussed in SECY-12-0084, "Status Report on Power Uprates," dated June 15, 2012 (ADAMS Accession No. ML12116A342).

The NRC staff notes that the licensee's emergency core cooling system (ECCS) loss-of-coolant system (LOCA) analysis, supporting the proposed EPU, was performed using a fuel rod thermal-mechanical code that does not account for the effects of thermal conductivity degradation (TCD). As discussed in NRC Information Notice (IN) 2011-21, "Realistic Emergency Core Cooling System Evaluation Model Effects Resulting from Nuclear Fuel Thermal Conductivity Degradation," dated December 13, 2011 (ADAMS Accession No. ML113430785), and IN 2009-23, Supplement 1, "Nuclear Fuel Thermal Conductivity Degradation," dated October 26, 2012 (ML121730336), safety analyses performed for reactors using methods that do not account for TCD may underestimate the fuel's calculated peak cladding temperature. As such, it is the staff's intent to request the licensee to provide information based on revised ECCS LOCA analyses that account for the effects of TCD. This information will be requested by separate correspondence. Untimely resolution of this issue will impact the overall EPU review schedule.

If you have any questions, please contact me at (301) 415-1420.

Sincerely,

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

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Richard B. Ennis, Senior Project Manager
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