Exelon Nuclear
200 Exelon Way
Kennett Square, PA 19348

www.exeloncorp.com

Exelon Nuclear

February 14, 2008

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
Docket Nos. 50-277 and 50-278

Subject: License Amendment Request - Revise LPRM Calibration Frequency
Supplemental Response Global Nuclear Fuel Report - GNF S-0000-0080-3313, Rev. 1, "PB LPRM Calibration Interval Extension Support"

References:

1) Letter from P. B. Cowan, Exelon Generation Company, LLC, to U.S. Nuclear Regulatory Commission, "License Amendment Request - Revise Local Power Range Monitor Calibration Frequency," dated November 17, 2006

2) U.S. Nuclear Regulatory Commission e-mail dated August 15, 2007, for Peach Bottom Atomic Power Station, Units 2 and 3, draft Request for Additional Information Related to Exelon License Amendment Request Regarding Revisions to the Local Power Range Monitor Calibration Frequency (TAC Nos. MD3717/3718)

3) Letter from P. B. Cowan, Exelon Generation Company, LLC, to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information Concerning License Amendment Request to Revise Local Power Range Monitor Calibration Frequency," dated September 21, 2007

4) Letter from John D. Hughey, U.S. Nuclear Regulatory Commission, to Mr. Charles G. Pardee, Exelon Generation Company, LLC, "Peach Bottom Atomic Power Station, Units 2 and 3, - Proposed Amendment to Extend Local Power Range Monitor Calibration Interval" (TAC Nos. MD3717 and MD3718), dated December 14, 2007

5) Letter from P. B. Cowan, Exelon Generation Company, LLC, to U.S. Nuclear Regulatory Commission, "License Amendment Request – Revise LPRM Calibration Frequency Global Nuclear Fuel Report – Exelon Nuclear LPRM Calibration Interval Increase for Peach Bottom Atomic Station, Units 2 and 3," dated December 21, 2007

Designated ORIGINAL PER PM

Attachment 1 transmitted herewith contains SUNSI. When separated from the attachment, this transmittal document is decontrolled.

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6) Letter from P. B. Cowan, Exelon Generation Company, LLC, to U.S. Nuclear Regulatory Commission, "License Amendment Request – Revise LPRM Calibration Frequency Supplemental Response Global Nuclear Fuel Report - GNF S-0000-0080-3313, Rev. 0, "PB LPRM Calibration Interval Extension Support," dated February 1, 2008

By letter dated November 17, 2006 (Reference 1), Exelon Generation Company, LLC (Exelon) requested changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, respectively. The proposed changes would increase the interval between Local Power Range Monitor (LPRM) calibrations from 1000 megawatt-days/ton (MWD/T) to 2000 MWD/T. In References 2 and 4, the NRC requested additional information concerning the PBAPS License Amendment Request (LAR). Exelon submitted responses to the NRC's request for additional information by letters dated September 21, 2007 (Reference 3) and December 21, 2007 (Reference 5).

In addition, during teleconference discussions with NRC, Exelon, and Global Nuclear Fuel (GNF) representatives on January 15, 2008, the NRC requested additional information related to LPRM uncertainty and sensitivity. Exelon provided a response to this request as documented in a letter dated February 1, 2008 (Reference 6).

Subsequently, during additional teleconference discussions with NRC, Exelon, and Global Nuclear Fuel (GNF) representatives on February 7, 2008, the NRC requested further clarification regarding information on a graph depicting LPRM calibration as a function of LPRM exposure. As a result of the discussions, Exelon agreed to submit additional information.

Accordingly, attached is a revision to the GNF analysis that was previously provided in the Reference 6 letter in support of extending the nominal LPRM calibration interval from 1000 MWD/T to 2000 MWD/T. The GNF analysis was revised to include clarifying information related to the graph. Attachment 1 to this letter provides a copy of the supporting GNF analysis (i.e., GNF Report S-0000-0080-3313, Rev. 1, *"PB LPRM Calibration Interval Extension Support")*, which GNF considers to contain proprietary information. The proprietary information is identified by bracketed text. GNF requests that the proprietary information in Attachment 1 be withheld from public disclosure, in accordance with the requirements of 10 CFR 9.17(a)(4) and 10 CFR 2.390(a)(4). An original signed affidavit supporting this request is included in Attachment 1 to this letter. Attachment 2 to this letter contains a *non-proprietary* version of the GNF analysis (i.e., GNF Report S-0000-0080-3313, Rev. 1).

Exelon has concluded that the information provided in this response does not impact the conclusions of the: 1) Technical Analysis, 2) No Significant Hazards Consideration under the standards set forth in 10 CFR 50.92(c), or 3) Environmental Consideration as provided in the Reference 1 letter.

There are no regulatory commitments contained within this letter. If you have any further 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 14th day of February 2008.

Respectfully,

SAT

Pamela B. Cowan
Director – Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment 1: Global Nuclear Fuel Report GNF S-0000-0080-3313, Rev. 1, "PB LPRM Calibration Interval Extension Support" (Proprietary Version and supporting Affidavit)

Attachment 2: Global Nuclear Fuel Report GNF S-0000-0080-3313, Rev. 1, "PB LPRM Calibration Interval Extension Support" (Non-Proprietary Version)

cc: Regional Administrator - NRC Region I w/ Attachment 2
NRC Senior Resident Inspector - PBAPS "
NRC Project Manager, NRR - PBAPS "
Director, Bureau of Radiation Protection - Pennsylvania Department of Environmental Protection "

ATTACHMENT 2

Peach Bottom Atomic Power Station
Units 2 and 3
Docket Nos. 50-277 and 50-278

License Amendment Request
Revise LPRM Calibration Interval

Global Nuclear Fuel Report GNF S-0000-0080-3313, Rev. 1,
"PB LPRM Calibration Interval Extension Support"

Non-Proprietary Version

PB LPRM Calibration Interval Extension Support

Background

Exelon will be seeking a calibration interval extension for the Peach Bottom Units' LPRMs from the Nuclear Regulatory Commission (NRC). GNF is providing support as to the impact of such a change on the calculated Safety Limit MCPR. The following is the GNF response.

GNF Response

As stated in the Technical Specifications basis regarding LPRM calibration interval requirement, "The 1000 MWD/T Frequency is based on operating experience with LPRM sensitivity changes." Figure 1 is a typical graph of the natural logarithm of the LPRM calibration current versus the LPRM exposure. [[

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The last sentence of Section 3.2 of NEDC-32694P-A Rev.0 states:

[[

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By doubling the LPRM update uncertainty, the total update uncertainty becomes:

[[ ]]

Equation 3-3 of Section 3.3 of NEDC-32694P-A Rev. 0 then is used to fold the total update uncertainty into the total bundle power uncertainty:

[[ ]]

Therefore, by doubling the LPRM update uncertainty, the total bundle power uncertainty becomes [[ ]]

For the Peach Bottom plants, comparison between SLMCPR calculations using the original LPRM update uncertainty and the doubled LPRM update uncertainty shows an [[
]] on the calculated SLMCPR value.

[[

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Figure 1 LPRM Calibration as a function of LPRM exposure