

April 17, 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 – Application of Alternative Source Term  
Supplemental Response Related to Containment Overpressure License

References:

1. Letter from Pamela B. Cowan, Exelon Generation Company, LLC, to U. S. Nuclear Regulatory Commission, "License Amendment Request – Application of Alternative Source Term," dated July 13, 2007
2. U.S. Nuclear Regulatory Commission e-mail dated March 18, 2008, draft Request for Additional Information (RAI), Peach Bottom Atomic Power Station, Units 2 and 3, License Amendment Request (LAR), Alternative Source Term Application (TAC Nos. MD6806 and MD6807)

In Reference 1, Exelon Generation Company, LLC (Exelon) submitted an application requesting a change 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 change was requested to support the application of Alternative Source Term (AST) methodology at PBAPS, Units 2 and 3. In Reference 2, the Nuclear Regulatory Commission (NRC) issued a draft request for additional information concerning the PBAPS License Amendment Request (LAR) related to proposed changes to the Containment Overpressure License (COPL) in support of AST.

Subsequently, during teleconferences on March 19, 2008, and March 25, 2008, NRC and Exelon representatives further discussed the COPL issue in support of AST. As a result of these discussions, Exelon agreed to provide supplemental information pertaining to COPL for AST by April 18, 2008. This supplemental information is attached.

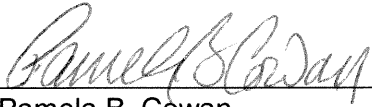
Exelon has concluded that the information provided in this response does not impact the conclusions of the: 1) Technical Analysis, 2) No Significant Hazards Consideration under the standards set forth in 10 CFR 50.92(c), or 3) Environmental Consideration as provided in the original submittal (Reference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

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.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on the 17th day of April 2008.

Respectfully,

gbc  


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

Attachment: Supplemental Response Related to Containment Overpressure License

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

**ATTACHMENT**

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

**License Amendment Request - Alternative Source Term (AST)  
Supplemental Response Related to Containment Overpressure License**

## **Background**

By letter dated July 13, 2007, Exelon Generation Company, LLC (Exelon) submitted an application requesting a change 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 change was requested to support the application of Alternative Source Term (AST) methodology at PBAPS, Units 2 and 3.

By electronic mail (e-mail) on March 18, 2008, the Nuclear Regulatory Commission (NRC) transmitted a draft Request for Additional Information (RAI) relative to proposed changes to the Containment Overpressure License (COPL) in support of AST. The draft RAI discussed the potential need to submit calculations that had been referenced in the July 13, 2007, License Amendment Request (LAR). However, during subsequent teleconference discussions on March 19, 2008, and March 25, 2008, NRC and Exelon representatives further discussed the COPL issue and the need to submit the calculations. As a result of these discussions, Exelon agreed to provide supplemental information to clarify the COPL in support of AST in lieu of providing the calculations. Exelon agreed to submit this supplemental information by April 18, 2008.

## **NRC Draft Question (SCVB RAI 4)**

*Submit the latest calculations for PM-1010 and PM-1013 referenced in the application and applicable to Proposed Change 2.11.*

## **Response**

On March 19, 2008, and March 25, 2008, during teleconference discussions, NRC and Exelon representatives discussed the NRC's expectations related to applying the Containment Overpressure License (COPL) limits for AST. During the March 18, 2008, teleconference, Exelon briefly discussed the three reasons why the containment overpressure methodology was being included in the AST submittal, and a rationale for potentially eliminating the COPL limit line.

1. An increase in the AST proposed containment leakage values for the Main Steam Isolation Valves (MSIVs) and general containment leakage required the calculation for Minimum Containment Overpressure Available (MCPA) to be revised. The AST-proposed increased loss of nitrogen during the postulated events caused a decrease in the MCPA, which impacted the NRC's previously approved COPL limit line. The original COPL was established by the NRC to ensure a specified amount of margin to the MCPA was reserved. It was agreed that future impacts to the COPL would be reviewed by the NRC. As part of the AST submittal, a new COPL limit line is being proposed which ensures ample margin to both the available and required pressure lines. (Note: The minimum containment pressure required for the Residual Heat Removal system and Core Spray system was not impacted as a result of the AST analyses, and their calculations were not revised because of it.)

2. A change in methodology was made in the MCPA analysis with respect to how the containment leakages were treated. Previously, a constant mass leakage was maintained throughout the postulated event. However, due to the AST-proposed increased leakage, leakage is now treated as a function of the containment pressure. This methodology change was described in previous RAI responses (Reference 1) to Exelon's earlier AST submittal (Reference 2), and was again discussed in Attachment 6 to the July 13, 2007, AST License Amendment Request (LAR).
3. The issue about the "Containment Purge" case within the MCPA analysis was also discussed. The amount of time allowed in the containment purge configuration was previously controlled by the original Peach Bottom Technical Specifications (TS). During the conversion to the Improved Technical Specifications (ITS) at PBAPS, the associated Technical Specification (TS) Limiting Condition for Operation (LCO) was relocated to a licensee-controlled document. The AST license amendment proposes to restore this TS LCO as it was in the original PBAPS TS, eliminating the need for the Containment Purge case.

Given the potential to impact COPL limits in the future, either due to changes in MCPA or the Residual Heat Removal (RHR) and Core Spray (CS) required pressures, it is possible that the NRC would need to review and approve future changes to the COPL limit values prior to implementation. Therefore, Exelon proposes to eliminate the COPL limit line depicted in the design basis calculations and UFSAR. Exelon will continue to demonstrate that the containment pressure available during the postulated events meets or exceeds that required by the RHR and CS systems. Any future changes that could impact MCPA for these systems will need to be evaluated in accordance with the requirements of 10CFR50.59.

### **References**

1. Letter dated May 20, 2004, from Keith Jury (Exelon) to U.S. Nuclear Regulatory Commission (USNRC), *Supplement to the Request for License Amendments Related to Application of Alternative Source, dated July 14, 2003*
2. Letter dated July 14, 2003, from Michael P. Gallagher (Exelon) to U.S. Nuclear Regulatory Commission (USNRC), *Request for License Amendments Related to Application of Alternative Source Term*