January 24, 2005

Mr. Bryce L. Shriver President-PPL Generation and Chief Nuclear Officer PPL Susquehanna, LLC Two North Ninth Street, GENTW15 Allentown, PA 18101-1179

#### SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2 - REQUEST FOR ADDITIONAL INFORMATION (RAI) - MINIMUM CRITICAL POWER RATIO SAFETY LIMITS AND REFERENCE CHANGES (TAC NO. MB5610)

Dear Mr. Shriver:

In reviewing your application of September 8, 2004, the U.S. Nuclear Regulatory Commission staff has determined that additional information contained in the enclosure to this letter is needed to complete its review. We discussed this issue with your staff during a conference call on January 19, 2004. As we indicated during our conversation, we are enclosing a formal RAI. The enclosed questions have been revised from the draft RAI to exclude the questions that were answered during the conference call. As agreed to by your staff, we request you respond within 30 days of the date of this letter.

If you have any questions, please contact me at 301-415-1030.

Sincerely,

#### /**RA**/

Richard V. Guzman, Project Manager, Section 1 Project Directorate I Division of Licensing Project Management Office of Nuclear Reactor Regulation

Docket No. 50-388

Enclosure: RAI

cc w/encl: See next page

Mr. Bryce L. Shriver President-PPL Generation and Chief Nuclear Officer PPL Susquehanna, LLC Two North Ninth Street, GENTW15 Allentown, PA 18101-1179

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# REQUEST FOR ADDITIONAL INFORMATION

## RELATING TO MINIMUM CRITICAL POWER RATIO (MCPR)

# SAFETY LIMITS AND REFERENCE CHANGES

## SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

## DOCKET NO. 50-388

The Nuclear Regulatory Commission (NRC) staff is reviewing the proposed license amendment request to Facility Operating License No. NPF-22, relating to MCPR safety limits and reference changes dated September 8, 2004, and has found further clarification is needed as follows:

- 1. Please provide a figure to show the reference core loading pattern for Cycle 13 operation and identify any difference from Cycle 12 core design. Provide a detailed description of how to determine the final core and fuel design to achieve a 24-month fuel reload cycle.
- 2. In Technical Specification (TS) 5.6.5.b, "Core Operating Limits Report," there are 11 of 19 approved methodologies to support TS 3.2.2. Please identify the input parameters in a flow chart (as shown in Figure 1 of your letter dated April 27, 2004) supported by the appropriate approved methodologies to support TS 3.2.2 calculations for this MCPR safety limit analysis for Cycle 13 operation. Also identify the design record file to support this TS amendment.
- 3. Please identify any significant contributing parameters such as power distribution uncertainty, channel bow, and others, which will impact the MCPR safety limit calculation in a table, and quantify their impact on the final MCPR safety limit values for Cycle 13.

CC:

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Board of Supervisors Salem Township P.O. Box 405 Berwick, PA 18603-0035

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