

March 31, 2004

Mr. Bryce L. Shriver
Senior Vice President
and Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Boulevard NUCSB3
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2 - REQUEST FOR
ADDITIONAL INFORMATION (RAI) - MINIMUM CRITICAL POWER RATIO
SAFETY LIMITS (TAC NO. MC0837)

Dear Mr. Shriver:

In reviewing your application of September 16, 2003, the 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 March 25, 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

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REQUEST FOR ADDITIONAL INFORMATION
RELATING TO PROPOSED AMENDMENT TO REVISE
MINIMUM CRITICAL POWER RATIO SAFETY LIMITS
PPL SUSQUEHANNA, LLC
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2
DOCKET NO. 50-388

The Nuclear Regulatory Commission staff is reviewing the proposed license amendment request to Facility Operating License No. NPF-22, relating to minimum critical power ratio safety limits (MCPRSL) dated September 16, 2003, and has found further clarification is needed as follows:

1. Provide a reference core loading pattern for Unit 2 Cycle 12 (U2C12) operation and a detailed description of the final core and fuel design to achieve a 24-month fuel reload cycle at the licensed rated power of 3489 MWt.
2. Identify the approved methodologies used in the U2C12 analysis and justify their applicability to the MCPRSL analysis for U2C12 operation. Also, identify the design documents (i.e. calculations) to support the proposed technical specification amendment, and provide a summary table or figure to show the number of rods that might experience boiling transition.
3. Provide a detailed description of the differences in calculating the mid-cycle U2C12 MCPRSL relative to the beginning-of-cycle U2C12 MCPRSL in terms of power distribution uncertainties and neutronic codes/methodologies used; and provide a detailed explanation of how the decrease in the MCPRSL is largely due to the incorporation of smaller power distribution uncertainties. Justify that the proposed MCPRSL reduction of 0.02 is conservative.

Enclosure

Susquehanna Steam Electric Station, Unit Nos. 1 and 2

cc:

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Susquehanna Steam Electric Station, Unit Nos. 1 and 2

cc:

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Salem Township
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Dr. Judith Johnsrud
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