

November 1, 2005

Mr. Britt T. McKinney  
Sr. Vice President  
and Chief Nuclear Officer  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSB3  
Berwick, PA 18603-0467

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) - SUSQUEHANNA STEAM  
ELECTRIC STATION, UNIT 1 (SSES 1) - REVISED MINIMUM CRITICAL  
POWER RATIO SAFETY LIMIT (TAC NO. MC8626)

Dear Mr. McKinney:

In reviewing your submittal of October 14, 2005, concerning a request to revise Technical Specification 2.1.1.2 for SSES 1, the Nuclear Regulatory Commission (NRC) staff has determined that additional information contained in the enclosure to this letter is needed to complete its review. These questions were discussed with your staff during a teleconference on October 25, 2005. As agreed to by your staff, we request you respond within 30 days of the date of this letter. In addition, we request that you meet with the NRC staff following the SSES 1 startup to discuss your post-outage testing results and root-cause analysis with respect to the fuel channel/control cell interference issues at SSES 1.

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

Sincerely,

**/RA/**

Richard V. Guzman, Project Manager  
Plant Licensing Branch A  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-387

Enclosure: RAI

cc w/encl: See next page

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OFFICE	NRR/LPLA/PM	NRR/LPLA/LA	NRR/SNPB/BC	NRR/LPLA/BC
NAME	RGuzman	SLittle	FAkstulewicz	RLaufer
DATE	11/1/05	10/31/05	11/1/05	11/1/05

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REQUEST FOR ADDITIONAL INFORMATION  
RELATING TO MINIMUM CRITICAL POWER RATIO SAFETY LIMIT FOR  
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1 (SSES 1)  
PPL SUSQUEHANNA, LLC (PPL)  
DOCKET NO. 50-387

The Nuclear Regulatory Commission (NRC) staff is reviewing the proposed license amendment to Facility Operating License No. NPF-14 requesting to revise the SSES 1 Cycle 14 (U1C14A) minimum critical power ratio safety limit (MCPRSL). The NRC staff has determined that the information requested below will be needed to complete its review.

1. Please describe how the U1C14A core loading pattern is established and what criteria should be met to reinsert twice burned fuel bundles. Identify which design documentation file was used for this core design.
2. Please justify that assumed bow twice the Advanced Nuclear Fuels (ANF) database is conservative for the redesign U1C14A core. Also, provide clarification that channel bow required for MCPRSL calculation specified in ANF-524(P)(A), Revision 2, "ANF Critical Power Methodology for Boiling Water Reactors," and Supplement 1, Revision 2, is still applicable to the MCPRSL calculation.
3. Please describe the PPL channel management action plan with respect to the General Electric (GE) guidance provided by GE report SC05-06, "Updated Surveillance Program for Fuel Channel-Control Blade Interference Monitoring," dated July 14, 2005, and justify the difference if any.
4. Please describe the fuel assembly inspection program planned for the mid-cycle outage as well as follow-on pool-side inspection programs prior to Cycle 15. Include in this program description the following:
  - a) Description of the measurement device and the accuracy of its channel deflection measurements.
  - b) Threshold used to determine when to re-channel and/or re-insert a fuel assembly.
  - c) Degree of fuel pin inspections.
  - d) List of channel bow measurements on channels being used to re-channel assemblies.
  - e) Qualify the relationship between cold, unstressed pool-side measurements and hot, stressed (delta-pressure across channel wall during operation) in-reactor channel deflection.

Susquehanna Steam Electric Station, Unit Nos. 1 and 2

Enclosure

cc:

Robert A. Saccone  
Vice President - Nuclear Operations  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSB3  
Berwick, PA 18603-0467

Aloysius J. Wrape, III  
General Manager - Performance  
Improvement and Oversight  
PPL Susquehanna, LLC  
Two North Ninth Street, GENPL4  
Allentown, PA 18101-1179

Terry L. Harpster  
General Manager - Plant Support  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSA4  
Berwick, PA 18603-0467

Richard D. Pagodin  
General Manager - Nuclear Engineering  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSB3  
Berwick, PA 18603-0467

Rocco R. Sgarro  
Manager - Nuclear Regulatory Affairs  
PPL Susquehanna, LLC  
Two North Ninth Street, GENPL4  
Allentown, PA 18101-1179

Walter E. Morrissey  
Supervising Engineer  
Nuclear Regulatory Affairs  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSA4  
Berwick, PA 18603-0467

Michael H. Crowthers  
Supervising Engineer  
Nuclear Regulatory Affairs  
PPL Susquehanna, LLC  
Two North Ninth Street, GENPL4  
Allentown, PA 18101-1179

Steven M. Cook

Manager - Quality Assurance  
PPL Susquehanna, LLC  
769 Salem Blvd., NUCSB2  
Berwick, PA 18603-0467

Luis A. Ramos  
Community Relations Manager,  
Susquehanna  
PPL Susquehanna, LLC  
634 Salem Blvd., SSO  
Berwick, PA 18603-0467

Bryan A. Snapp, Esq  
Assoc. General Counsel  
PPL Services Corporation  
Two North Ninth Street, GENTW3  
Allentown, PA 18101-1179

Supervisor - Document Control Services  
PPL Susquehanna, LLC  
Two North Ninth Street, GENPL4  
Allentown, PA 18101-1179

Richard W. Osborne  
Allegheny Electric Cooperative, Inc.  
212 Locust Street  
P.O. Box 1266  
Harrisburg, PA 17108-1266

Director, Bureau of Radiation Protection  
Pennsylvania Department of  
Environmental Protection  
Rachel Carson State Office Building  
P.O. Box 8469  
Harrisburg, PA 17105-8469

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 35, NUCSA4  
Berwick, PA 18603-0035

Regional Administrator, Region 1  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Susquehanna Steam Electric Station, Unit Nos. 1 and 2

cc:

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

Dr. Judith Johnsrud  
National Energy Committee  
Sierra Club  
443 Orlando Avenue  
State College, PA 16803