

October 19, 2006

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, UNITS 1 AND 2 (SSES 1 AND 2) - APPLICATION TO IMPLEMENT AVERAGE POWER RANGE MONITOR/ROD BLOCK MONITOR/TECHNICAL SPECIFICATIONS/MAXIMUM EXTENDED LOAD LINE LIMIT ANALYSIS (ARTS/MELLLA) (TAC NOS. MC9040 AND MC9041)

Dear Mr. McKinney:

In reviewing your letter dated November 18, 2005, concerning the request for an amendment to the SSES 1 and 2 Technical Specifications that supports the implementation of ARTS/MELLLA, the Nuclear Regulatory Commission 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 4, 2006. As agreed to by your staff, we request you respond within 45 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  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure:  
RAI

cc w/encl: See next page

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) - SUSQUEHANNA STEAM  
ELECTRIC STATION, UNITS 1 AND 2 (SSES 1 AND 2) - APPLICATION TO  
IMPLEMENT AVERAGE POWER RANGE MONITOR/ROD BLOCK  
MONITOR/TECHNICAL SPECIFICATIONS/MAXIMUM EXTENDED LOAD LINE  
LIMIT ANALYSIS (ARTS/MELLLA) (TAC NOS. MC9040 AND MC9041)

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\* Input provided. No substantive changes made.

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REQUEST FOR ADDITIONAL INFORMATION  
RELATING TO THE  
APPLICATION FOR IMPLEMENTATION OF AVERAGE POWER RANGE  
MONITOR/ROD BLOCK MONITOR/TECHNICAL SPECIFICATIONS/MAXIMUM  
EXTENDED LOAD LINE LIMIT ANALYSIS (ARTS/MELLLA)  
SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 (SSES 1 AND 2)  
PPL SUSQUEHANNA, LLC  
DOCKET NOS. 50-387 AND 50-388

The Nuclear Regulatory Commission (NRC) staff is reviewing the proposed license amendment from PPL Susquehanna, LLC (PPL, the licensee) to Facility Operating License No. NPF-14 and NPF-22 related to the implementation of the ARTS/MELLLA for SSES 1 and 2. The NRC staff has determined that additional information requested below will be needed to complete its review.

1. Explain why the existing setpoints, which are being removed or altered by this license amendment, are part of the SSES 1 and 2 design configuration and Technical Specifications (TSs), but are not credited in any SSES 1 and 2 safety licensing analyses.
  - a. Provide a statement as to whether or not the setpoint is a limiting safety system setting (LSSS) for a variable on which a safety limit (SL) has been placed as discussed in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36(c)(1)(ii)(A).
  - b. Examples of instrument functions that might have LSSSs included in this subset in accordance with the plant-specific licensing basis are: rod block monitor withdrawal blocks, feedwater and main turbine high water level trip, and end of cycle recirculation pump trip. For each setpoint, or related group of setpoints, that you determined not to be SL-related, explain the basis for this determination.
  - c. If the revised information is related to LSSS setpoints, discuss the setpoint methodology used at SSES 1 and 2 to establish these new values. Provide documentation (including sample calculations) of the methodology used for establishing the limiting setpoint and the limiting acceptable values for the as-found and as-left setpoints as measured in periodic surveillance testing as described below. Indicate the related analytical limits and other limiting design values (and the sources of these values) for each setpoint.

Enclosure

2. For setpoints that are determined to be SL-related, the NRC letter to Nuclear Energy Institute's Setpoint Methods Task Force, "Technical Specification for Addressing Issues Related to Setpoint Allowable Values," dated September 7, 2005 (Agencywide Documents Access and Management System Accession No. ML052500004), describes setpoint-related TSs (SRTSs) that are acceptable to the NRC for instrument settings associated with SL-related setpoints. Specifically, part "A" of the enclosure to the letter provides limiting condition for operation notes to be added to the TSs, and part "B" includes a check list of the information to be provided in the TS Bases related to the proposed TS changes.
  - a. Describe whether and how you plan to implement the SRTSs suggested in the September 7, 2005, letter. If you do not plan to adopt the suggested SRTSs, explain how you will ensure compliance with 10 CFR 50.36 by addressing items 2b and 2c, below.
  - b. As-Found Setpoint Evaluation: Describe how surveillance test results and associated TS limits are used to establish operability of the safety system. Show that this evaluation is consistent with the assumptions and results of the setpoint calculation methodology. Discuss the plant corrective action processes (including plant procedures) for restoring channels to operable status when channels are determined to be "inoperable" or "operable but degraded." If the criteria for determining operability of the instrument being tested are located in a document other than the TSs (e.g., plant test procedure), explain how the requirements of 10 CFR 50.36 are met.
  - c. As-Left Setpoint Control: Describe the controls employed to ensure that the instrument setpoint is, upon completion of surveillance testing, consistent with the assumptions of the associated analyses. If the controls are located in a document other than the TSs (e.g., plant test procedure) explain how the requirements of 10 CFR 50.36 are met.
3. For setpoints that are not determined to be SL-related, describe the measures to be taken to ensure that the associated instrument channel is capable of performing its specified safety functions in accordance with applicable design requirements and associated analyses. Include in your discussion, information on the controls you employ to ensure the as-left trip setting after completion of periodic surveillance is consistent with your setpoint methodology. Also, discuss the plant corrective action processes (including plant procedures) for restoring channels to operable status when channels are determined to be "inoperable" or "operable but degraded." If the controls are located in a document other than the TSs (e.g., plant test procedure), describe how it is ensured that the controls will be implemented.
4. In Attachment 4 of your November 18, 2005, submittal, item (e) provides the modification of the multi-vendor data (MVD) as a specific equipment change for ARTS logic implementation. The NRC staff requests the following information with regards to the safety-related MVD equipment and the anticipated changes to it:
  - a. Please explain the complete functional capabilities of the MVD as provided by the equipment manufacturer.
  - b. By functional description, identify the functions by which PPL anticipates using the MVD.

Susquehanna Steam Electric Station, Unit Nos. 1 and 2

cc:

- c. Explain what functions will change, and the procedural steps to incorporate the modifications to the MVD for the ARTS logic implementation.

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