

April 12, 2007

Mr. Britt T. McKinney
Sr. Vice President
and Chief Nuclear Officer
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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) - EXTENDED POWER
UPRATE APPLICATION RE: OPERATOR LICENSING AND HUMAN
PERFORMANCE TECHNICAL REVIEW (TAC NOS. MD3309 AND MD3310)

Dear Mr. McKinney:

In reviewing your letter dated October 11, 2006, concerning the request to increase the maximum steady-state power level at the SSES 1 and 2 from 3489 megawatts thermal (MWt) to 3952 MWt, 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 on March 29, 2007. As agreed to by your staff, we request you respond by May 4, 2007.

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

Sincerely,

/RA/

Richard V. Guzman, Senior 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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* RAI provided by memo. No substantive changes made.

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DATE	4/09/07	4/11/07	3/14/07	4/12/07

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REQUEST FOR ADDITIONAL INFORMATION
RELATING TO THE
APPLICATION FOR EXTENDED POWER UPRATE (EPU)
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 request from PPL Susquehanna, LLC (PPL, the licensee) to support the application of the EPU for SSES 1 and 2. The NRC staff has determined that additional information requested below will be needed to complete its review.

1. Description of changes to abnormal operating procedures (AOPs) and emergency operating procedures (EOPs) for Units 1 and 2 as a result of the proposed constant pressure power uprate (CPPU).
 - a. Discuss the current operator responses to transients, accidents, and other special events that could be affected by the CPPU conditions for each unit. Include details on the AOPs and EOPs in which operator actions are modified for accident scenarios to be affected by CPPU conditions.
 - b. Discuss the EOPs that will direct existing or new operator actions in using Ultimate Heat Sink (UHS) manual valves in the event that motor operated bypass header valves are unavailable.
 - c. Discuss the AOPs and EOPs to be revised or developed as a result of the proposed Appendix R modifications.
 - d. Indicate any changes to setpoints and alarms that may be incorporated into the AOPs and EOPs as a result of the proposed CPPU.
 - e. Describe any additional AOP and EOP procedural changes that credit manual actions due to the CPPU that are not currently credited in the Final Safety Analysis Report (FSAR).
 - f. If any changes are identified, describe how these changes may affect operator action response times credited in the safety analyses in the Updated Final Safety Analysis Report (UFSAR).
2. Identification and description of the effect on manual actions sensitive to the proposed CPPU that are credited in the safety analyses in the UFSAR.
 - a. Describe the manual actions involving the modification of the UHS. Indicate if any compensatory actions in addition to closing the manual valves in the event of the motor operated bypass header valves being unavailable.

Enclosure

- b. Discuss if any additional manual actions that are credited in the UFSAR will be modified due to the CPPU conditions and, if those manual actions are affected, whether the licensee has or will perform an evaluation of the environment of the manual actions for the applicable accident scenarios.
 - c. Discuss any plant modifications due to the CPPU that will require additional operator manual actions that could impact the existing action times for specific accident scenarios.
 - d. Discuss the manual actions to be associated with the Appendix R modifications as a result of the CPPU. Indicate if these manual actions are modified or new manual actions and the CPPU effect on the existing allowable operator action times.
- 3. Identification and description of changes to human interfaces for control room controls, displays, and alarms that will affect the operator's ability to interpret, read or visually identify the information required from the instrumentation.
 - a. Discuss any changes to the controls, displays, and alarms as a result of the CPPU and whether these changes will be similar on both units. If not, indicate the major differences between both units that could impact the operators' ability to address abnormal and emergency scenarios and how these differences will be addressed during the operator training.
 - b. Describe any controls, displays, alarms that will be upgraded from analog to digital instruments as a result of the proposed CPPU and how the operators will be tested to determine proficiency.
- 4. Description of changes to the Safety Parameter Display System (SPDS) that have been identified including monitored points, alert and trip set points, and various changes in EOP curves and limits.
 - a. Page 10-31 of the licensee's proposed safety analysis report mentions physical equipment changes required by CPPU. Discuss whether the SPDS is among these physical changes and what impact these physical changes will have on the operators' ability to assess the reactor's status.
- 5. Description of changes to the operator training program and the control room simulator.
 - a. Discuss how the operator actions, which are modified or developed for accident scenarios as a result of CPPU, will be incorporated in the operator training, in particular those operator actions that result from the Appendix R modifications. Also, discuss if these actions will be validated through operator walkthrough or simulator exercises preceding implementation into the operator training program.
 - b. Provide the implementation schedule for making the changes to the operator training program and the plant-referenced control room simulator.

Susquehanna Steam Electric Station, Unit Nos. 1 and 2

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