

CATEGORY 1

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ACCESSION NBR: 9712110015 DOC.DATE: 97/12/04 NOTARIZED: NO DOCKET #
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SUBJECT: Forwards ltr dtd 971015 to discuss proposed amend 209 to license NPF-14 re SES, Unit 1 cycle 11 reload TS change for ATRIUM 10. Power distributions used in safety limit MCPR calculaitons were generated from SES, Unit 1 cycle 11 design.

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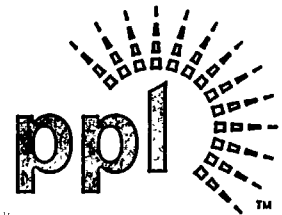
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**SUSQUEHANNA STEAM ELECTRIC STATION
UNIT 1 CYCLE 11 INFORMATION
PLA-4802 FILES A17-2/R41-2**

Docket No. 50-387

- References:*
- 1) PLA-4664, "Proposed Amendment No. 209 to License NPF-14: Unit 1 Technical Specification Changes for ATRIUM™-10," August 26, 1997.
 - 2) EMF-97-010(P), Rev. 1, "Application of ANFB to ATRIUM™-10 for Susquehanna Reloads," March 1997.
 - 3) PLA-4595, "Response for Request for Additional Information Siemens' Report EMF-97-010," March 27, 1997.

On October 15, 1997, PP&L met with members of the NRC staff to discuss the proposed Susquehanna SES Unit 1 Cycle 11 reload Technical Specification change (Reference 1). During the discussion, the NRC staff requested that PP&L document a brief description of the Unit 1 Cycle 11 core design and the power distributions used for the Safety Limit MCPR calculations. In addition, the NRC staff requested a comparison of the Unit 1 Cycle 11 core design to that previously approved for the Susquehanna SES Unit 2 Cycle 9 core design. This letter provides the requested information.

The Susquehanna SES Unit 1 Cycle 11 core will consist of 308 Siemens Power Corporation (SPC) ATRIUM™-10 assemblies, 452 SPC 9x9-2 assemblies, and four ABB LUAs (initially inserted in Susquehanna SES Unit 1 Cycle 10). The Cycle 11 reload will be the first introduction of the ATRIUM™-10 fuel into Unit 1. The Susquehanna SES Unit 1 Cycle 11 ATRIUM™-10 fuel assembly neutronic design is identical to the design currently in use at Susquehanna SES Unit 2 for Cycle 9. As in previous Susquehanna SES reload cores, the Unit 1 Cycle 11 core design is a conventional scatter-load design. This type of core loading strategy results in the highest exposed fuel (SPC 9X9-2 for Unit 1 Cycle 11) placed on the core periphery and the more reactive once and twice burned fuel scatter loaded in the core interior with the fresh ATRIUM™-10 assemblies. This was the same loading strategy that was used for development of the Unit 2 Cycle 9 reload core design and, as a result, the general configurations of the Unit 1 Cycle 11 and Unit 2 Cycle 9 reload cores are similar. This similarity between the reload core designs is also supported by the fact that both cores are designed to support the first 24 month operating cycle on their respective Unit.

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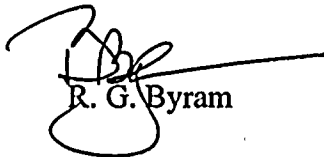


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The power distributions used in the Safety Limit MCPR calculations were generated from Susquehanna SES Unit 1 Cycle 11 design calculations. Both the power distributions and the Safety Limit MCPR were performed specifically for Susquehanna SES Unit 1 Cycle 11 using the methodology approved for application to Unit 2 Cycle 9 (References 2 and 3). This is identical to the approach that was used to derive Safety Limit MCPR which was NRC approved and currently in use for Unit 2 Cycle 9. Given the reload design similarities discussed above and, the similarities in projected operational strategy between Unit 1 Cycle 11 and Unit 2 Cycle 9, it was expected that the Unit 1 Cycle 11 Safety Limit MCPR calculations would yield results similar to those for Unit 2 Cycle 9. In fact, the proposed MCPR Safety Limits for Unit 1 Cycle 11 are identical to those approved for Unit 2 Cycle 9.

For further information please contact Mr. A. J. Roscioli at (610) 774-4019.

Sincerely,



R. G. Byram

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