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U.S. Nuclear Regulatory Commission
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Washington, DC 20555

**SUSQUEHANNA STEAM ELECTRIC STATION
SUPPLEMENT TO REQUEST FOR ADDITIONAL
INFORMATION REGARDING PROPOSED
AMENDMENT NO. 194 TO LICENSE NPF-22:
MCPR SAFETY LIMITS
PLA-5275**

Docket No. 50-388

- Reference:*
- 1) PLA-5263 "Request for Additional Information Regarding Proposed Amendment No 194 To License NPF-22: MCPR Safety Limits dated 12/1/00
 - 2) NRC RAI, R. G. Schaaf to R. G. Byram, "Request for Additional Information Related to Minimum Critical Power Ratio Safety Limits Technical Specification Change Request (TAC NO. MA8540)" dated November 21, 2000
 - 3) PLA-5169, Proposed Amendment No. 194 to License NPF-22: MCPR Safety Limits dated March 20, 2000.

The purpose of this letter is to provide supplemental information regarding our response, Reference 1, to a request for additional information, Reference 2, relative to our proposed change to MCPR Safety Limits in the Unit 2 Technical Specification Section 2.1.1.2 requested in Reference 3. The need for this supplemental information was developed during two teleconferences held January 10, 2001 and January 17, 2001.

The supplemental information is as follows:

NRC has requested a qualitative discussion of the impact of three factors on the proposed MCPR Safety Limit: the transition from a mixed core (w/SPC 9x9-2 fuel) to an all ATRIUM™-10 core, power uprate, and core design. This discussion is provided below.

The presence of 9x9-2 fuel in the prior cycle is not a contributor to the difference in calculated MCPR Safety Limit values. This is due to the fact that the 9x9-2 assemblies were high exposure/low power assemblies that do not contribute to any pins being calculated to be in boiling transition. Thus, the transition from a mixed core (containing 9x9-2 and ATRIUM™-10 fuel) to the U2C11 (all ATRIUM™-10) core did not affect the calculated MCPR Safety Limit.

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For a given core configuration, an increase in core power flattens the core radial power distribution due to void feedback, and a flatter distribution will increase the number of pins calculated to be in boiling transition. Thus, the increased power level is a contributor to the increase in the calculated MCPR Safety Limit between U2C10 and U2C11.

Past reload analyses in which no change in rated core power occurred have shown that increases in the calculated MCPR Safety Limit can occur solely as a result of the core design. Thus, the change in the MCPR Safety Limit from U2C10 to U2C11 is also partly due to the specific U2C11 core design.

To summarize, the increase in the MCPR Safety Limit is attributable to both the core design and the power uprate, but not to the transition to a full core of ATRIUM™-10 fuel.

If you have any questions, please contact Mr. M. H. Crowthers at (610) 774-7766.

Sincerely,



R. G. Byram

Attachment

copy: NRC Region I
Mr. S. Hansell, NRC Sr. Resident Inspector
Mr. R. G. Schaaf, NRC Project Manager
Mr. D. J. Allard, PA DEP

**BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION**


In the Matter of :
PPL Susquehanna, LLC : Docket No. 50-388

**SUPPLEMENT TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING PROPOSED AMENDMENT NO. 194 TO LICENSE NPF-22:
MCPR SAFETY LIMITS**

Licensee, PPL Susquehanna, LLC, hereby files a revision to its Facility Operating License No. NPF-22 dated March 23, 1984.


This amendment contains a revision to the Susquehanna SES Unit 2 Technical Specifications.

PPL Susquehanna, LLC
By:



R. G. Byram
Sr. Vice-President and Chief Nuclear Officer

Sworn to and subscribed before me
This 22nd day of January, 2001.



Notary Public

Notarial Seal
Nancy J. Lannen, Notary Public
Allentown, Lehigh County
My Commission Expires June 14, 2004