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**SUSQUEHANNA STEAM ELECTRIC STATION**  
**10 CFR 50.46 REPORT**  
**PLA-5390**

**Docket Nos. 50-387**  
**and 50-388**

*References:*

- 1) *Letter from R. G. Byram (PPL) to the U. S. Nuclear Regulatory Commission, "10 CFR 50.46 Report – 30 Day Report", dated June 7, 2001 (PLA-5326).*
- 2) *Letter from J. F. Mallay (FRA-ANP) to Chief, Planning, Program and Management Support Branch of the U.S. Nuclear Regulatory Commission, "2000 – Annual Reporting of Changes and Errors in ECCS Evaluation Models", dated February 23, 2001*
- 3) *Letter from R. G. Byram (PPL) to the U. S. Nuclear Regulatory Commission, "10 CFR 50.46 Report", dated November 13, 2000 (PLA-5256).*

This report is being sent in accordance with 10 CFR 50.46 (a)(3)(ii), which requires annual reporting of changes to or errors in evaluation models used for calculating Emergency Core Cooling System (ECCS) performance, and an estimate of their effect on the limiting ECCS analysis.

**General Electric SAFER/GESTR-LOCA**

This methodology is applicable to Susquehanna SES Unit 1. There have been no changes or errors to Peak Cladding Temperature (PCT) using the SAFER/GESTR-LOCA methodology beyond those identified in the PPL Susquehanna, LLC 10 CFR 50.46 report submitted on June 7, 2001 (Reference 1).

**Siemens Power Corporation (SPC) EXEM/BWR LOCA Analysis**

This methodology is applicable to Susquehanna SES Unit 1 and Unit 2. Reference 2 reports PCT changes that cover all Framatome-ANP\* BWR LOCA analyses through December 31, 2000. All non-zero PCT errors identified in Reference 2 were previously reported by PPL in the last annual PPL Susquehanna, LLC 10 CFR50.46 report (Reference 3). Subsequent to the submittal of the last annual 10 CFR 50.46 report (Reference 3), five non-zero PCT changes were reported to PPL Susquehanna, LLC. The specific changes in PCT for the Susquehanna SES are provided in Table 1. The total error listed in the last column of Table 1 does not meet the significance threshold for change (50°F) identified in 10 CFR 50.46(a)(3)(i); therefore, no 30-day report is required.

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**Table 1**  
**Framatome-ANP EXEM/BWR LOCA Analysis**  
**Changes and/or Errors in Calculated ECCS Performance**

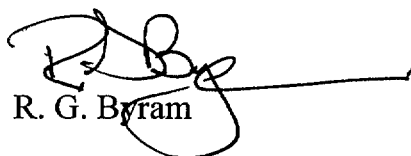
| Description of Change/Error  | Estimated $\Delta$ PCT (°F) | Absolute Value of $\Delta$ PCT (°F) |
|--|-----------------------------|-------------------------------------|
| Reconciliation of numerical iteration schemes in RODEX.                  | 1                           | 1                                   |
| Incorrect HUXY gadolinia conductivity model.                             | -3                          | 3                                   |
| Incorrect message to determine if BULGEX model is turned on soon enough. | -37                         | 37                                  |
| Incorrect constant for rupture temperature calculation.                  | 1                           | 1                                   |
| Incorrect Zircaloy heat of reaction as function of temperature.          | 3                           | 3                                   |
| <b>Total</b>   | <b>-35</b>                  | <b>45</b>                           |

\*In January 2001, the merger between Siemens Power Corporation (SPC) and Framatome was finalized. The two merged corporations became Framatome-ANP.

PPL Susquehanna, LLC will continue to track future changes to the evaluation models used in the above LOCA analyses to ensure that the PCT values remain below the 10 CFR 50.46 limit, and to ensure that the 10 CFR 50.46 reporting requirements are met.

Please contact Mr. R. D. Kichline at (610) 774-7705, if there are any questions concerning this letter.

Sincerely,



R. G. Byram

copy: NRC Region I  
 Mr. S. L. Hansell, NRC Sr. Resident Inspector  
 Mr. R. G. Schaaf, NRC Project Manager