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U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION (SSES)  
10 CFR 50.46 - ANNUAL REPORT  
PLA-7339**

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

*Reference: 1. PLA-7175, J. A. Franke (PPL) to Document Control Desk (USNRC),  
"Susquehanna Steam Electric Station, 10 CFR 50.46 – Annual Report,"  
dated June 20, 2014.*

This report is being sent in accordance with 10 CFR 50.46(a)(3)(ii).

10 CFR 50.46(a)(3)(ii) requires (in part) 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. Additionally, a proposed schedule is required for re-analysis or identification of other actions necessary to show compliance with 10 CFR 50.46 requirements.

The ECCS performance evaluation method applicable to both SSES Unit 1 and Unit 2 is the AREVA NP EXEM BWR-2000 LOCA Methodology.

Since May 6, 2014 (as reported by Reference 1) until May 6, 2015, there have been no non-zero Peak Cladding Temperature (PCT) changes reported to PPL Susquehanna, LLC for Units 1 and 2. Thus, the current licensing basis PCT remains valid.

There is one reportable issue for 10 CFR 50.46 since the last report (Reference 1). In the EXEM BWR-2000 evaluation model, End of Blowdown is defined as the time when rated flow from the low pressure core spray system (LPCS) is reached. For some plants, including Susquehanna, this time was implemented as the time the pressure reached the pressure corresponding to rated LPCS flow. A review of the limiting break conditions show there is no difference between the times determined by the two methods of implementation. Therefore, the 10 CFR 50.46 reportable impact on the Susquehanna analysis of record PCT is 0°F. There have been no other modeling or error corrections to the ECCS evaluation method since the last report (Reference 1).

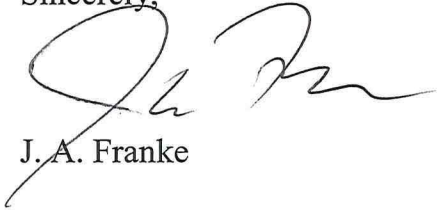
This letter meets the annual reporting requirements.

Susquehanna Nuclear, LLC will continue to track future changes to the evaluation models used in the applicable loss of coolant accident (LOCA) analysis methods 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.

There are no new regulatory commitments contained in this submittal.

If you have any questions, please contact Mr. Jeffery N. Grisewood, Manager - Nuclear Regulatory Affairs at (570) 542-1330.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over a horizontal line.

J. A. Franke

Copy: NRC Region I  
Mr. J. Greives, NRC Sr. Resident Inspector  
Mr. J. Whited, NRC Project Manager  
Mr. B. Fuller, PA DEP/BRP