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JUN 07 2016

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

**SUSQUEHANNA STEAM ELECTRIC STATION (SSES)
10 CFR 50.46 - ANNUAL REPORT
PLA-7475**

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

Reference: 1. PLA-7339, J. A. Franke (Susquehanna Nuclear, LLC) to Document Control Desk (USNRC), "Susquehanna Steam Electric Station, 10 CFR 50.46 – Annual Report," dated June 18, 2015.

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 April 28, 2015 (as reported by Reference 1) until April 28, 2016, there have been no non-zero Peak Cladding Temperature (PCT) changes reported to Susquehanna Nuclear, LLC for Units 1 and 2. Thus, the current licensing basis PCT remains valid.

There have been no 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 regarding this letter, please contact Mr. Jason R. Jennings,
Manager - Nuclear Regulatory Affairs, at (570) 542-3155.

Sincerely,

 *For J. A. Franke*

J. A. Franke

Copy: NRC Region I
Mr. J. E. Greives, NRC Sr. Resident Inspector
Ms. T. E. Hood, NRC Project Manager
Mr. M. Shields, PA DEP/BRP