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SUBJECT: Submits changes to or error in evaluation models used for
calculating ECCS performance & estimate of their effect on
limiting ECCS analysis.

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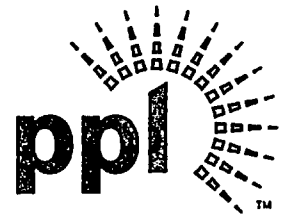
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SUSQUEHANNA STEAM ELECTRIC STATION
10 CFR 50.46 REPORT
PLA-5002

Docket Nos. 50-387
and 50-388

References:

- 1) NE-092-001 A, Revision 1, "Licensing Topical Report for Power Uprate with Increased Core Flow," Pennsylvania Power & Light Company, December 1992 and associated NRC SER dated November 30, 1993.
- 2) Letter from R. G. Byram (PP&L) to the U. S. Nuclear Regulatory Commission, "10 CFR 50.46 Report," November 11, 1997 (PLA-4793).
- 3) Letter from G. A. Watford (GE) to Chief, Reactor Systems Branch of the U. S. Nuclear Regulatory Commission, "Reporting of Changes and Errors in ECCS Evaluation Models," June 30, 1998 (MFN-032-98).
- 4) ANF-91-048(P)(A), "Advanced Nuclear Fuels Corporation Methodology for Boiling Water Reactors EXEM BWR Evaluation Model," January 1993.
- 5) Letter from H. D. Curet (SPC) to Chief, Planning, Program and Management Support Branch of the U.S. Nuclear Regulatory Commission, "1997 - Annual Report of Changes and Errors in ECCS Evaluation Models," February 27, 1998 (NRC:98:014).

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

References 1 and 2 address the GE 10 CFR 50.46 report that applies to the SAFER/GESTR-LOCA methodology for SSES. Reference 3 states that there has been no change in Peak Cladding Temperature (PCT) due to changes to or errors in acceptable evaluation models used for calculating ECCS performance.

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Siemens Power Corporation (SPC) EXEM/BWR LOCA Analysis

In April 1997, the SPC EXEM/BWR LOCA methodology (Reference 4) was employed in support of the first reload of SPC ATRIUM-10 fuel at SSES Unit 2. The following changes apply to the SPC 10 CFR 50.46 LOCA methodology since the last annual report (Reference 2).

Reference 5 reports a PCT change that covers all SPC BWR LOCA analysis for the reported error in the HUXY code for 1997. The specific change for SSES due to the error in the HUXY code is -14°F. An additional, PCT change of 13°F was also identified by SPC. Table 1 provides a description of the changes. The combination of the errors listed in column 3 of Table 1 do not meet the significance threshold for change (50°F) identified in 10 CFR 50.46(a)(3)(i) for which a 30-day report is required.


Table 1
Changes and/or Errors in Calculated ECCS Performance

Description of Change/Error	Estimated ΔPCT (°F)	Absolute Value of ΔPCT (°F)
Error in rod internal pressure calculation in heat up code HUXYLSE. May result in premature rod failure prediction. Increased time to rod failure decreases PCT.	-14	14
Error in input for gap conductance (HGAP) code RODEX2. Correction reduces HGAP, which increases PCT because of increase in stored energy.	13	13
Total	-1	27

PP&L, Inc. 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.

For further information please contact Mr. J. M Kenny at (610) 774-7535.

Sincerely,



R. G. Byram

copy: NRC Region I
 Mr. S. T. Barr, NRC Acting Sr. Resident Inspector
 Mr. V. Nerses, NRC Sr. Project Manager

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