TU ELECTRIC

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February 25, 1993

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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
LARGE BREAK LOCA METHODOLOGY

REF: TOPICAL REPORT "LARGE BREAK LOSS OF COOLANT ACCIDENT ANALYSIS METHODOLOGY", RXE-90-007, DECEMBER 1990

Gentlemen:

The above reference describes the application of the USNRC approved Siemens Nuclear Power (SNP), formerly Exxon Nuclear Corporation, EXEM/PWR Large Break LOCA Evaluation Model to CPSES Units 1 and 2. The Large Break LOCA calculations are performed in compliance with the approved methodology except for the following difference. TU Electric utilizes five axial nodes in the core region for the thermal-hydraulic calculations in the RELAP4 System Blowdown and Hot Channel rather than the three nodes shown in SNP's submittal. Five nodes are used to better represent the axial power distribution within the core, specifically those distributions skewed towards the top of the core, thereby increasing the accuracy of the calculations.

In accordance with the requirements of 10 CFR 50, Appendix K, Section II.3, TU Electric performed and documented a sensitivity study to evaluate the effect of the variations in core noding on the calculated peak cladding temperature (PCT). The core noding sensitivity study included core models consisting of three, five and seven nodes.

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Based on the resultant PCTs, it was shown that the five node core model represents a converged noding scheme. Therefore, the increase in the number of core nodes from three to five is shown to be acceptable. The five core nodes model enhances the representation of the power distribution within the core and increases the accuracy of the calculations.

Sincerely,

William J. Cahill, Jr.

By: D. R. Woodlan

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