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Executive Vice President

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NO. 50-445  
RADIAL PEAKING FACTOR LIMIT REPORT

Gentlemen:

In accordance with CPSES Technical Specification 6.9.1.6, TU Electric submits herewith a copy of the subject report for Cycle 1. As required, the report contains (1) the  $F_{xy}$  limits for all core planes containing Bank "D" control rods and for all unrodded core planes and (2) a plot of the function  $FQ^{T-Pre1}$  vs. axial core height with the limiting envelope included.

If you have any questions concerning this information, please contact either Mickey Killgore or Ray Ashley of the TU Electric staff; they can be reached by phone at (214) 812-8271 or (214) 812-8415, respectively.

Sincerely,

*William J. Cahill, Jr.*  
William J. Cahill, Jr.

By: *Roger D. Walker*  
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RLA/vld  
Enclosure

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### Radial Peaking Factor Limit Report

This Radial Peaking Factor Limit Report is provided in accordance with Paragraph 6.9.1.12 of the Comanche Peak Unit 1 Nuclear Plant Technical Specifications.

The  $F_{xy}$  limits for RATED THERMAL POWER within specific core planes for Cycle 1 shall be:

1.  $F_{xy}^{RTP}$  less than or equal to 1.71 for all core planes containing bank "D" control rods, and
2.  $F_{xy}^{RTP}$  less than or equal to 1.55 for all unrodded core planes.

These  $F_{xy}(z)$  limits were used to confirm that the heat flux hot channel factor  $F_Q(z)$  will be limited to the Technical Specification values of:

$$F_Q(z) \leq \left[ \frac{2.32}{P} \right] [K(z)] \quad \text{for } P > 0.5 \text{ and,}$$

$$F_Q(z) \leq [4.64] [K(z)] \quad \text{for } P \leq 0.5$$

assuming the most limiting axial power distributions expected to result from the insertion and removal of Control Banks B, C and D during operation, including the accompanying variations in the axial xenon and power distributions as described in the "Power Distribution Control and Load Following Procedures", WCAP-8403, September, 1974. Therefore, these  $F_{xy}$  limits provide assurance that the initial conditions assumed in the LOCA analysis are met, along with the ECCS acceptance criteria of 10CFR50.46.

See Figure 1 for a plot of  $[F_Q^T \cdot P_{Re1}]$  vs. Axial Core Height.



Figure 1  
Maximum  $F_Q^T \cdot P_{Rel}$  vs. Axial Height  
During Normal Operation

