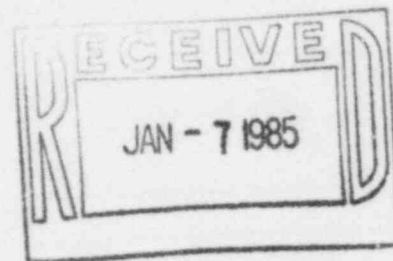**KGE**
THE ELECTRIC COMPANY

KANSAS GAS AND ELECTRIC COMPANY

GLENN L. KOESTER
VICE PRESIDENT · NUCLEAR

January 4, 1985

Mr. R.D. Martin, Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas   76011

>   KMLNRC 85-005
>   Re: Docket No. STN 50-482
>   Subj: Cycle 1 Radial Peaking Factor Limit Report

Dear Mr. Martin:

The attached Cycle 1 Radial Peaking Factor Limit Report is
submitted in accordance with Section 6.9.1.9 of the Wolf
Creek Generating Station Technical Specifications.

>   Yours very truly,
>
>   Glenn L Koester

GLK:bb
Attach
xc:HRDenton
    Office of Nuclear Reactor Regulation
    Attn: Core Performance Branch
    U.S. Nuclear Regulatory Commission
    Washington, D.C.   20555

    PO'Connor (2)
    HBundy

$IE31$

Radial Peaking Factor Limit Report

This Radial Peaking Factor Limit Report is provided in accordance with Paragraph 6.9.1.9 of the Wolf Creek 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 Fxy(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:

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

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

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 $[F_Q^{T} \cdot P_{Rel}]$ vs. Axial Core Height.

FIGURE 1

MAXIMUM $F_Q^T \cdot P_{REL}$ VERSUS AXIAL HEIGHT
DURING NORMAL CORE OPERATION