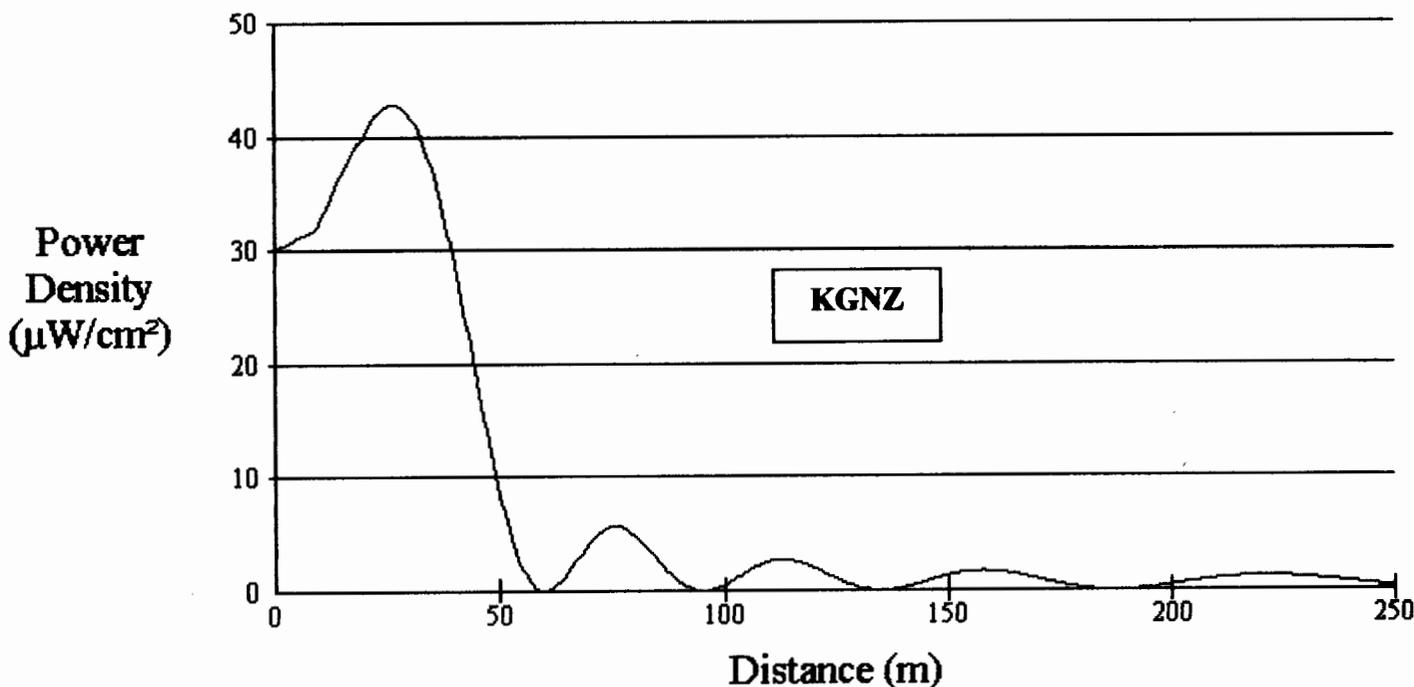


ANSI STUDY

This exhibit contains a study of the radio frequency radiation impact of the instant proposal. The predicted power density was studied at a level two meters lower than the actual height of the radiation centers AGL, to account for the head height of an average human body. The predicted contribution from KGNZ was calculated utilizing the OET FMMODEL program, and the predicted KJTN-LP contribution was calculated utilizing formula (7) from Section II of OET 65. Both studies are attached to this exhibit.

The maximum contribution from KGNZ was predicted to be approximately 44 $\mu\text{W}/\text{cm}^2$, or 22.0 percent of the maximum permissible uncontrolled (general population) exposure limit ($200 \mu\text{W}/\text{cm}^2$). The maximum contribution of the KJTN-LP proposal was predicted to be $40.71 \mu\text{W}/\text{cm}^2$, or 12.3% of the uncontrolled limit ($330 \mu\text{W}/\text{cm}^2$). If the maximums were to coincide in the same area, the combined contributions would total to produce 34.3% of the limit for uncontrolled exposure. Thus the instant proposal MEETS the requirements of 47 CFR §1.1310.

Power Density vs Distance



Office of Engineering and Technology

Distance (m):	250	Antenna Type:	Jampro "Double V" (EPA)
Horizontal ERP (W):	75000	Number of Elements:	8
Vertical ERP (W):	75000	Element Spacing:	1
Antenna Height (m):	110		

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Formula (7) from Section II of OET 65:

$$S = (2.56) (EIRP) / (4) (\pi) (R)^2$$

Where:

S = Highest power density (mW/cm²) at ground level

R = Distance from center antenna to ground in cm,

EIRP = 1.64 times ERP relative to dipole in mW,

Power is calculated at worst case conditions

MAX S = 1.65 mW/cm² for TV Channel 18

ERP = (0.4 times visual plus aural, times field factor².)

Station: KJTN-LP with ant. 93 m and Visual power 17 kw

$$S = \frac{(2.56) (1.64) (1000) [(0.4) (17,000) + (3,740)] (1.000)^2}{(4) (3.14) (9,300)^2}$$

S = 0.04071 mW/cm², 2.468 % of Controlled Exposure allowed.

S = 0.04071 mW/cm², 12.338 % of Uncontrolled Exposure allowed.