

Formula (7) from Section II of OET 65:

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

where:

S = Highest power density (mw/cm<sup>2</sup>) 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 = 2.07 mw/cm<sup>2</sup> for TV Channel 39

ERP = (0.4 times visual plus aural, times field factor<sup>2</sup>.)

Station: KBFY-LP with ant. 56 m and Visual power 8 kw

$$S = \frac{(2.56) (1.64) (1000) [(0.4) (8,000) + (1,760)] (1.000)^2}{(4) (3.14) (5,600)^2}$$

S = 0.05284 mw/cm<sup>2</sup>, 2.553 % of Controlled Exposure allowed.

S = 0.05284 mw/cm<sup>2</sup>, 12.764 % of Uncontrolled Exposure allowed.