

Formula (7) from Section II of OET 65:

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

Where:

S = Highest power density (mW/cm²) at 2m above ground

R = Distance from center antenna to 2m above ground, cm,

EIRP = 1.64 times ERP relative to dipole in mW.

MAX S for CH 46 (662 MHz) = 2.2 mW/cm² for controlled,
0.44 mW/cm² for uncontrolled exposure.

ERP = (horizontal and vertical added times field factor².)

Station: KSLN-LD with antenna up 27 meters and ERP 2.0 kW

$$S = \frac{(2.56) (1.64) (1000) (2000) (0.100)^2}{(4) (3.14) (2,700)^2}$$

S = 0.0009 mW/cm², 0.04 % of Controlled Exposure allowed.

S = 0.0009 mW/cm², 0.20 % of Uncontrolled Exposure allowed.

Per 47 CFR §1.1307(b)(3), power densities of less than 5% of the maximum permitted exposure limit do not require further study.