

**Engineering Statement
In Support of an
Application for a Construction Permit
KWIC, Topeka, Kansas**

Human Exposure To Radiofrequency Radiation Study

<u>CALL</u>	<u>Service</u>	<u>Channel</u>	<u>Frequency</u>	<u>Polarization</u>	<u>Antenna Height* (AGL)</u>	<u>ERP (kW)</u>	<u>Vertical Relative Field Factor</u>	<u>Predicted Power Density (mWcm²)</u>	<u>FCC Uncontrolled Limit (mWcm²)</u>	<u>Percent of Uncontrolled Limit</u>
KQTP	FM	275	102.9	H&V	151.5	30.000	1.000	0.0000032	0.200	0.002%
KWIC	FM	257	99.3	H&V	143.3	8.100	1.000	0.0000025	0.200	0.001%
KTWU	TV	11	121	H	284	316.000	1.000	0.0663598	0.200	33.180%
KTWU	DTV	23	527	H	265	815.000	0.300	0.1967717	0.351	56.007%
KTLJ-LP	TV	43	647	H	167.6	29.300	0.300	0.0178428	0.431	4.137%
KTLJ-LP	TV	43	647	H	94	9.400	0.300	0.0185468	0.431	4.300%

Total Percentage of ANSI value = 97.63%

* The antenna height indicated above is 2 meters less than the actual antenna height so that the predicted power density consider the 2 meter human height allowance.

The FM Model for window was used for the FM studies. For study purpose, a 6 element dipole EPA antenna with 0.833 spacing was used for KQTP and a 2 element dipole EPA antenna with 0.5 spacing was used for KWIC.

For the TV facilities, Equation (2), found on Page 30 of Supplement A to FCC OET Bulletin No. 65, detail the calculation technique for determining the power density levels at the base of the tower, assuming 100% downward radiation from the individual antennas.

As demonstrated, the total percentage of the ANSI values at the proposed site, considering the radiation of proposed facilities and the existing facilities is 97.63% of the limit for “uncontrolled” environments when using an EPA dipole antenna for study purposes. The total percentage for “controlled” environments is only 19.53%.