

**Engineering Statement  
In Support of an Application  
For License**

**WBZE, Tallahassee, Florida**

**Human Exposure To Radiofrequency Radiation Study**

<u>CALL</u>	<u>Service</u>	<u>Channel</u>	<u>Freq.</u>	<u>Polarization</u>	<u>Antenna Height** (AGL)</u>	<u>ERP (kW)</u>	<u>Relative Field Factor</u>	<u>Vertical Predicted Power Density (mW/cm<sup>2</sup>)</u>	<u>FCC Uncontrolled Limit (W/cm<sup>2</sup>)</u>	<u>Percent of Uncontrolled Limit</u>
WBZE	FM	255	98.9	H&V	151	100.0	1.000	0.0000193	0.200	0.0096%
WBWT	FM	264	100.7	H&V	111	11.5	1.000	0.0004902	0.200	0.2451%
KXSR	FM	268	101.5	H&V	111	37.0	1.000	0.0015620	0.200	0.7810%
WWLD	FM	272	102.3	H&V	151	27.0	1.000	0.0000003	0.200	0.0002%
W21BK	TV	21	515	H	70.1	29.5	0.300	0.1062293	0.343	30.9406%
W25BN	TV	35	599	H	168	20.0	0.300	0.0121208	0.399	3.0353%
WBXT-CA	TV	43	647	H	152	49.0	0.300	0.0043700	0.431	1.0131%
WVUP-CA	TV	45	659	H	148	7.6	0.300	0.0059542	0.439	1.3553%
WWWF-LP	TV	47	671	H	100	150.0	0.300	0.0026000	0.447	0.5812%

Total Percentage of ANSI (uncontrolled) value = 37.9614%

\* 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.

An eight (8) element Dielectric Model DCR-M8FE-SS.87B40.40 is a common antenna for WBZE and WWLD. The tabulation of elevation pattern of the specified antenna was used to determine the relative field and power density and is being included as an attached page. The relative field at 90 degrees is 0.008. The relative field of 0.008 would produce 0.0064 kilowatts at 90 degrees with an ERP of 100.0 kilowatts (for WBZE) and a relative field of 0.008 will produce 0.001728 kilowatts at 90 degrees with an ERP of 27.0 kilowatts (for WWLD). The predicted power density at 90 degrees was computed to be 0.0193  $\mu\text{W}/\text{cm}^2$  for WBZE and 0.0003  $\mu\text{W}/\text{cm}^2$  for WWLD.

A four (4) element ERI Model SHP-4AC is a common antenna for WBWT and WXSR which is located on an adjacent tower (ASRN 1030925), 290 meters from WBZE's tower. The ERI or Jampro JBCP "Rototiller" (EPA) 4 element, full spaced antenna of the FM Model for Windows was used for study purposes and to determine the power density at the base of the WBZE tower. With the giving antenna, WBWT will produce 0.0004902  $\text{mW}/\text{cm}^2$  and WXSR will produce 0.001562  $\text{mW}/\text{cm}^2$  at the base of the WBZE's tower.

For the TV facilities of W21BK, W35BN, and WVUP-CA, 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.

For the TV facility of WBXT-CA, the RF Exposure exhibit attached to the application for license (File number BPTTL-20010731AAN) was used to determined the power density.

For the TV facility of WWWF-LP, the RF Exposure exhibit attached to the application for license (File number BPTTL-20010629AAD) was used to determined the power density.

As demonstrated, the total percentage of the ANSI values, considering the radiation of all facilities on the licensee supporting structure and all facilities on the adjacent structure existing facilities is 37.96% of the limit for the "uncontrolled" environments and 7.59% of the limit for the "controlled" environments.