



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WTVX is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WTVX antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

The predicted emissions of WTVX must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WTVX, which will operate on television Channel 20 (506-512 MHz), the MPE is 339.3 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,696.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WTVX facility will operate with a maximum ERP of 725 kW from an elliptically polarized directional transmitting antenna with a centerline height of 454.2 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WTVX facility is predicted to produce a power density at two meters above ground level of 15.48 $\mu\text{W}/\text{cm}^2$, which is 4.56% of the FCC guideline value for an “uncontrolled” environment, and 0.91% of the FCC’s guideline value for “controlled” environments. There is one LPTV DTV station and two FM stations located at the WTVX site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations located within the relevant proximity, is 94.73% of the limit applicable to “uncontrolled” environments, and 18.95% of the limit for “controlled” environments. (See Appendix A)

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**
WTVX, Fort Pierce, FL
Channel 20, 725 kW, 455.7 m HAAT
July, 2017

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLAR- IZATION</u>	<u>ANTENNA HEIGHT</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>WORST-CASE PREDICTED POWER DENSITY ($\mu\text{W}/\text{cm}^2$)</u>	<u>FCC UNCONTROLLED LIMIT ($\mu\text{W}/\text{cm}^2$)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WTVX**	DT	20	509	H	454.2	725.000	0.300	10.837	339.33	3.19%
WTVX**	DT	20	509	V	454.2	310.800	0.300	4.645	339.33	1.37%
WDOX-LD	DT	24	533	H	15	6.000	0.300	106.753	355.33	30.04%
WCNO	FM	210	89.9	H & V	183	100.000	<note 1>	115.276	200.00	57.64%
WLDI	FM	238	95.5	H & V	282	100.000	<note 2>	4.972	200.00	2.49%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										94.73%

* For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.

** WTVX is proposing elliptical polarization, the table above includes both the proposed horizontal and vertical power levels

note 1: FM Model Antenna: EPA Type 1; 8-bay, full wave spaced antenna, dipole is worst case assumption

note 2: FM Model Antenna: EPA Type 3; ERI Rototiller Type, 8-bay, full wave spaced antenna