



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WUTV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WUTV 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 WUTV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WUTV, which will operate on television Channel 36 (602-608 MHz), the MPE is 403.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and $2,016.7 \mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WUTV facility will operate with a maximum ERP of 455 kW from an elliptically polarized directional transmitting antenna with a centerline height of 329 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WUTV facility is predicted to produce a power density at two meters above ground level of $39.369 \mu\text{W}/\text{cm}^2$, which is 9.76% of the FCC guideline value for an “uncontrolled” environment, and 1.952% of the FCC’s guideline value for “controlled” environments. There is an LPTV DTV station that is also located at the WUTV site. Therefore, the total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations within the relevant proximity, is 10.79% of the limit applicable to “uncontrolled” environments, and 2.158% of the limit for “controlled” environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY

RADIATION STUDY

WUTV, Buffalo, NY

Channel 36, 700 kW, 329 m HAAT

June, 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>
WUTV	DT	36	605	H & V	329	700.000	0.300	39.369	403.33	9.76%
WBNF-CD	DT	15	479	H & V	168	15.000	0.300	3.274	319.33	1.03%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										10.79%

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