



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WNWO-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WNWO-TV 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 WNWO-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WNWO-TV, which will operate on television Channel 23 (524-530 MHz), the MPE is 351.3 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,756.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WNWO-TV facility will operate with a maximum ERP of 275 kW from an elliptically polarized directional transmitting antenna with a centerline height of 424.7 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WNWO-TV facility is predicted to produce a power density at two meters above ground level of 9.256 $\mu\text{W}/\text{cm}^2$, which is 2.63% of the FCC guideline value for an “uncontrolled” environment, and 0.526% of the FCC’s guideline value for “controlled” environments. There are no other broadcast facilities that are located at the WNWO-TV 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 2.63% of the limit applicable to “uncontrolled” environments, and 0.526% of the limit for “controlled” environments. (See Appendix A)

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

WNWO-TV, Toledo, OH
Channel 23, 275 kW, 423.5 m HAAT
October, 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>
WNWO-TV	DT	23	527	H & V	424.7	275.000	0.300	9.256	351.33	2.63%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										2.63%

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