



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WRGT-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WRGT-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 WRGT-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WRGT-TV, 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 WRGT-TV facility will operate with a maximum ERP of 1000 kW from an elliptically polarized directional transmitting antenna with a centerline height of 343 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WRGT-TV facility is predicted to produce a power density at two meters above ground level of 51.718 $\mu\text{W}/\text{cm}^2$, which is 12.82% of the FCC guideline value for an “uncontrolled” environment, and 2.564% of the FCC’s guideline value for “controlled” environments. There are two other full-power DTV facilities, two LPTV DTV facilities and one FM station that are located at the WRGT-TV 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 34.55% of the limit applicable to “uncontrolled” environments, and 6.91% of the limit for “controlled” environments. (See Appendix A)

APPENDIX A

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

WRGT-TV, Dayton, OH
Channel 36, 1000 kW, 351 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 (μW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (μW/cm²)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WKEF	DT	34	593	H & V	343	950.000	0.300	49.132	395.33	12.43%
WLWD-LD	DT	20	509	H	250	5.000	0.300	0.244	339.33	0.07%
WBDT	DT	26	545	H	341	770.000	0.300	20.147	363.33	5.55%
WRGT-TV	DT	36	605	H & V	343	1000.000	0.300	51.718	403.33	12.82%
WRCX-LP	DT	40	629	H	280	0.320	0.300	0.012	419.33	0.00%
WKCD	FM	212	90.3	H & V	283	8.700	1.000	7.362	200.00	3.68%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										34.55%

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