



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WWHO is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WWHO 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 WWHO must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WWHO, which will operate on television Channel 23 (524-530 MHz), the MPE is 351.33 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 WWHO facility will operate with a maximum ERP of 1000 kW from an elliptically polarized omni-directional transmitting antenna with a centerline height of 305 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WWHO facility is predicted to produce a power density at two meters above ground level of 65.503 $\mu\text{W}/\text{cm}^2$, which is 18.64% of the FCC guideline value for an “uncontrolled” environment, and 3.728% of the FCC’s guideline value for “controlled” environments. There are two other full-power DTV broadcast facilities, two full-power FM stations and four FM translators that are located at the WWHO 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 63.18% of the limit applicable to “uncontrolled” environments, and 12.64% of the limit for “controlled” environments. (See Appendix A)

APPENDIX A

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

WWHO, Chillicothe, OH
Channel 23, 1000 kW, 286m 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>
WUFM	FM	204	88.7	H & V	255	5.000	1.000	5.220	200.00	2.61%
WHKC	FM	218	91.5	H & V	228.6	15.000	1.000	19.520	200.00	9.76%
W225CS	FM	225	92.9	H & V	240	0.250	1.000	0.295	200.00	0.15%
W240CX	FM	240	95.9	H & V	235	0.099	1.000	0.122	200.00	0.06%
W257CV	FM	257	99.3	H & V	261	0.085	1.000	0.085	200.00	0.04%
W283CL	FM	283	104.5	H & V	191	0.250	1.000	0.468	200.00	0.23%
WTTE	DT	27	551	H & V	290	1000.000	0.300	72.504	367.33	19.74%
WWHO	DT	23	527	H & V	305	1000.000	0.300	65.503	351.33	18.64%
WSYX	DT	28	557	H & V	305	677.000	0.300	44.346	371.33	11.94%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 63.18%

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