



## **ENVIRONMENTAL AND RADIO FREQUENCY SAFETY**

The licensee of WOSU-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WOSU-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 WOSU-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WOSU-TV, which will operate on television Channel 16 (482-488 MHz), the MPE is 323.33 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) in an “uncontrolled” environment and 1,616.7  $\mu\text{W}/\text{cm}^2$  in a “controlled” environment. The proposed WOSU-TV facility will operate with a maximum ERP of 311 kW from a horizontally polarized omni-directional transmitting antenna with a centerline height of 330.8 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WOSU-TV facility is predicted to produce a power density at two meters above ground level of 8.65  $\mu\text{W}/\text{cm}^2$ , which is 2.68% of the FCC guideline value for an “uncontrolled” environment, and 0.536% of the FCC’s guideline value for “controlled” environments. There are no other broadcast facilities located at the WOSU-TV site. Therefore the total estimated percentage of the ANSI value at the proposed site is only that contributed by WOSU-TV: 2.68% of the limit applicable to “uncontrolled” environments, and 0.536% of the limit for “controlled” environments. (See Appendix A)

## SUMMARY OF RADIOFREQUENCY

### RADIATION STUDY

WOSU-TV, Columbus, OH

Channel 16, 311 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 (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>FCC UNCONTROLLED LIMIT (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WOSU-TV	DT	16	485	H	330.8	311.000	0.300	8.650	323.33	2.68%
<b>TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =</b>										
										<b>2.68%</b>

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