



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WDKA is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WDKA 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 WDKA must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WDKA, which will operate on television Channel 25 (536-542 MHz), the MPE is 359.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,796.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WDKA facility will operate with a maximum ERP of 623 kW from a horizontally polarized directional transmitting antenna with a centerline height of 282 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WDKA facility is predicted to produce a power density at two meters above ground level of 23.894 $\mu\text{W}/\text{cm}^2$, which is 6.65% of the FCC guideline value for an “uncontrolled” environment, and 1.33% of the FCC’s guideline value for “controlled” environments. There are no other facilities that are located at the WDKA 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 6.65% of the limit applicable to “uncontrolled” environments, and 1.33% of the limit for “controlled” environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY

RADIATION STUDY

WDKA, Paducah, KY

Channel 25, 623 kW, 327 m HAAT

May, 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>
WDKA	DT	25	539	H	282	623.000	0.300	23.894	359.33	6.65%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 6.65%										

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