



## ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WVAH-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WVAH-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 WVAH-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WVAH-TV, which will operate on television Channel 24 (530-536 MHz), the MPE is 355.33 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) in an “uncontrolled” environment and  $1,776.7 \mu\text{W}/\text{cm}^2$  in a “controlled” environment. The proposed WVAH-TV facility will operate with a maximum ERP of 533 kW from a horizontally polarized omni-directional transmitting antenna with a centerline height of 432.1 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WVAH-TV facility is predicted to produce a power density at two meters above ground level of  $8.664 \mu\text{W}/\text{cm}^2$ , which is 2.44% of the FCC guideline value for an “uncontrolled” environment, and 0.488% of the FCC’s guideline value for “controlled” environments. There is one other full-power DTV facility, one LPTV DTV facility and one FM radio station that are located at the WVAH-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 26.82% of the limit applicable to “uncontrolled” environments, and 5.364% of the limit for “controlled” environments. (See Appendix A)

# SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WVAH-TV, Charleston, WV  
Channel 24, 533 kW, 514.1m 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 (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>UNCONTROLLED LIMIT (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WVAH-TV	DT	24	533	H	432.1	533.000	0.300	8.664	355.33	2.44%
WCHS-TV	DT	29	563	H	432.1	373.000	0.300	6.063	375.33	1.62%
WOCW-LP (CP)	DT	21	515	H	17.4	6.000	0.300	76.072	343.33	22.16%
WKLC-FM	FM	286	105.1	H & V	404	2.950	1.000	1.220	200.00	0.61%
<b>TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =</b>										<b>26.82%</b>

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