



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WHP-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WHP-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 WHP-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WHP-TV, which will operate on television Channel 32 (578-584 MHz), the MPE is 387.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,936.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WHP-TV facility will operate with a maximum ERP of 954 kW from a horizontally polarized directional transmitting antenna with a centerline height of 141 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WHP-TV facility is predicted to produce a power density at two meters above ground level of 148.469 $\mu\text{W}/\text{cm}^2$, which is 38.33% of the FCC guideline value for an “uncontrolled” environment, and 7.666% of the FCC’s guideline value for “controlled” environments. There are two other DTV facilities, two FM radio stations, one FM station auxiliary facility and one FM translator that are located at the WHP-TV site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all facilities within the relevant proximity, is 88.19% of the limit applicable to “uncontrolled” environments, and 17.64% of the limit for “controlled” environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WHP-TV, Harrisburg, PA
Channel 32, 954 kW, 369 m HAAT
July, 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>
WHP-TV**	DT	32	581	H	141	954.000	0.300	148.469	387.33	38.33%
WITF-TV	DT	36	605	H	192	50.000	0.300	4.165	403.33	1.03%
WGAL(DT)	DT	49	683	H	170	15.000	0.300	1.598	455.33	0.35%
WITF-FM	FM	208	89.5	H & V	199	5.900	<note 1>	1.901	200.00	0.95%
WRBT(AUX)	FM	235	94.9	H & V	30	2.400	<note 2>	28.960	200.00	14.48%
WRVV	FM	247	97.3	H & V	45	15.000	<note 2>	65.220	200.00	32.61%
W269AS	FM	268	101.5	V	80	0.160	1.000	0.879	200.00	0.44%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 88.19%

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

note 1: FM Model Antenna: EPA Type 2; 2-bay, full wave spaced antenna,

note 2: FM Model Antenna: EPA Type 3; ERI Rototiller Type, 2-bay, full wave spaced antenna