



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WSBT-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WSBT-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 WSBT-TV must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WSBT-TV, which will operate on television Channel 29 (560-566 MHz), the MPE is 375.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,876.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WSBT-TV facility will operate with a maximum ERP of 310 kW from a horizontally polarized omni-directional transmitting antenna with a centerline height of 309.1 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WSBT-TV facility is predicted to produce a power density at two meters above ground level of 9.89 $\mu\text{W}/\text{cm}^2$, which is 2.64% of the FCC guideline value for an “uncontrolled” environment, and 0.528% of the FCC’s guideline value for “controlled” environments. There is one full-power FM station and one FM translator that are also located at the WSBT-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 8.95% of the limit applicable to “uncontrolled” environments, and 1.79% of the limit for “controlled” environments. (See Appendix A)

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

WSBT-TV, South Bend, Indiana
CHANNEL 29, 310 kW ERP, 332.6 m HAAT
MAY, 2017

CALL	SERVICE	CHANNEL	FREQUENCY	POLARIZATION	ANTENNA HEIGHT ** mAGL	ERP (kW)	VERT. RELATIVE FIELD FACTOR	PREDICTED POWER DENSITY (mW/cm ²)	FCC UNCONTROLLED LIMIT (mW/cm ²)	PERCENT OF UNCONTROLLED LIMIT
W241AD	FM	241	96.1	H & V	150	0.210	1.000	0.00062	0.200	0.31%
WNSN	FM	268	101.5	H & V	269	13.000	1.000	0.01200	0.200	6.00%
WSBT-TV	DT	29	563	H	306.9	310.000	0.300	0.00989	0.375	2.64%
TOTAL PERCENTAGE OF ANSI VALUE=										8.95%

** The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.
This evaluation includes facilities collocated at the site, and facilities located within 315 meters.