

MINOR CHANGE APPLICATION
NEW AUXILIARY FM ANTENNA
RADIO LICENSE HOLDING CBC LLC
WXTA (FM) RADIO STATION
CH 250B1 - 97.9 MHZ - 1.4 KW
EDINBORO, PENNSYLVANIA
March 2016

EXHIBIT B

Radio Frequency Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations,, and utilizes the appropriate formulas contained in the OET Bulletin.¹

The proposed WXTA auxiliary antenna system will be mounted with its center of radiation 56.4 meters (185 feet) above the ground at the existing tower location and will operate with an effective radiated power of 1.4 kilowatts in the horizontal and vertical planes (circularly polarized). The proposed WXTC antenna is a three bay antenna. At 2.0 meters above the ground at the base of the tower, the height of an average person, the WXTA auxiliary antenna system will contribute 0.0186 mw/cm².² Based on exposure limitations for a controlled environment, 1.9% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 9.3% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

-
- 1) The FMModel Program was used for all calculations for the FM station contributions. The EPA single bay dipole antenna was used unless otherwise noted.
 - 2) This level of field occurs at 11.0 meters out from the base of the tower and is considered worst case.

The proposed WXKC auxiliary antenna system will be mounted with its center of radiation 56.4 meters (185 feet) above the ground at the existing tower location and will operate with an effective radiated power of 10.0 kilowatts in the horizontal and vertical planes (circularly polarized). The proposed WXKC antenna is a 3 bay antenna system. At 2.0 meters above the ground at the base of the tower, the height of an average person, the WXKC auxiliary antenna system will contribute 0.1331 mw/cm^2 .³ Based on exposure limitations for a controlled environment, 13.3% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 66.6% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

At the WRIE frequency of 1260 kHz, the center tower is 96.8° (0.268λ) in electrical height and operates with 5.0 kilowatts directionally with a two tower array during daytime hours and with a four tower array during nighttime hours. The towers are fenced at a minimum distance of 5.5 meters (18.0 feet) from the radiating structure. At this distance, the WRIE facility contributes an electrical field of 30.3 V/m and a magnetic field of 0.273 A/m. As WRIE operates below 1340 kHz, the limits for controlled and uncontrolled are the same. For controlled and uncontrolled environments, this level results in an electrical field contribution of 4.9% and a magnetic field contribution of 16.8%. Since the contribution of the magnetic field is the highest in the uncontrolled environment, it is considered worst case.

Combining the contributions of the proposed WXTA auxiliary antenna, the proposed WXKC auxiliary antenna, and WRIE, less than 93% of the uncontrolled limit is reached 2.0

3) This level of field occurs at 27.0 meters out from the base of the tower and is considered worst case.

meters above the ground at the base of the tower. Since this level for uncontrolled environments is less than the 100% limit defined by the Commission, the proposed WXTA and WXKC auxiliary antenna systems are believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, RLH will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, RLH will reduce the power of the facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.