

**MODIFY BMPED-20090612ADM**  
**RADIO TRAINING NETWORK, INC.**  
**KWND RADIO STATION**  
**CH 202C1 - 88.3 MHZ - 35.0 KW (DA)**  
**SPRINGFIELD, MISSOURI**  
**October 2009**

**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, specifically the co-located KTTS-FM and K204DT, and utilizes the appropriate formulas contained in the OET Bulletin.<sup>1</sup>

The proposed KWND antenna system will be mounted with its center of radiation 185.8 meters (610.2 feet) above the ground at the tower location and will operate with an effective radiated power 35.0 kilowatts in the horizontal and vertical planes (circularly polarized). At 2.0 meters, the height of an average person above the ground at the base of the tower, the KWND antenna system will contribute  $0.0416 \text{ mw/cm}^2$ .<sup>2</sup> Based on exposure limitations for a controlled environment, 4.2% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 20.8% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

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- 1) The contribution of the FM station was calculated with the FMModel program. The EPA dipole antenna was used for calculations unless otherwise noted.
  - 2) This level of contribution occurs at 50.0 meters out from the tower and is considered worst case.



The authorized KTTS-FM antenna system is mounted with its center of radiation 329.0 meters (1,079.4 feet) above the ground at the tower location and operates with an effective radiated power of 100.0 kilowatts in the horizontal and vertical plane (circularly polarized). At 2.0 meters, the height of an average person above the ground at the base of the tower, the KTTS-FM antenna system contributes  $0.0376 \text{ mw/cm}^2$ .<sup>3</sup> Based on exposure limitations for a controlled environment, 3.8% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 18.8% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized K204DT antenna system is mounted with its center of radiation 116.0 meters (380.5 feet) above the ground at the tower location and operates with an effective radiated power of 0.115 kilowatt in the vertical plane. At 2.0 meters, the height of an average person above the ground at the base of the tower, the K204DT antenna system contributes  $0.0003 \text{ mw/cm}^2$ .<sup>4</sup> Based on exposure limitations for a controlled environment, <0.1% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 0.2% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of KWND, KTTS-FM, and K204DT, a total of 39.8% of the limit for uncontrolled environments is reached at 2.0 meters above the ground at the base of the tower. Since this level for uncontrolled environments is below the 100% limit defined by the

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3) This level of contribution occurs at 88.0 meters out from the tower and is considered worst case.

4) This level of contribution occurs at 26.0 meters out from the tower and is considered worst case.

Commission, the proposed KWND facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, RTN will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, RTN 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.