

**MINOR CHANGE APPLICATION**  
**WEST JACKSONVILLE BAPTIST CHURCH, INC.**  
**WJBC-FM RADIO STATION**  
**CH 219C2 - 91.7 MHZ - 50.0 KW (DA)**  
**FERNANDINA BEACH, FLORIDA**  
**September 2007**

**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 WROO, and utilizes the appropriate formulas contained in the OET Bulletin.<sup>1</sup>

The proposed WJBC-FM antenna system will be mounted with its center of radiation 130.8 meters (429.1 feet) above the ground at the tower location and will operate with an effective radiated power of 50.0 kilowatts in the horizontal and vertical planes (circularly polarized). The WJBC-FM antenna system is to be an Electronics Research, Inc., rototiller style system (FCC/EPA Type #3); a single bay was used for worst case calculations. At 2.0 meters above the ground at the base of the tower, the height of an average person, the WJBC-FM antenna system will contribute 0.0448 mw/cm<sup>2</sup>.<sup>2</sup> Based on exposure limitations for a controlled

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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 128.0 meters out from the tower and is considered worst case.

environment, 4.5% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 22.4% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized WROO antenna system is mounted with its center of radiation 141.0 meters (462.6 feet) above the ground at the tower location and operates with an effective radiated power of 50.0 kilowatts in the horizontal and vertical planes (circularly polarized). The WROO antenna system is an Electronics Research, Inc., rototiller style system (FCC/EPA Type #3); a single bay was used for worst case calculations. At 2.0 meters above the ground at the base of the tower, the height of an average person, the WROO antenna system contributes 0.0385 mw/cm<sup>2</sup>.<sup>3</sup> Based on exposure limitations for a controlled environment, 3.9% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 19.3% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of WJBC-FM and WROO, a total of 41.7% 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 Commission, the proposed WJBC-FM facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, WJBC will post warning signs in the vicinity of the tower warning of potential radio

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3) This level of contribution occurs at 139.0 meters out from the tower and is considered worst case.

frequency radiation hazards at the site. In addition, WJBC 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.