

**MINOR CHANGE APPLICATION/  
NEW AUXILIARY FM ANTENNA  
MADIFIDE, INC.  
WFID (FM) RADIO STATION  
CH 239B - 95.7 MHZ - 16.0 KW  
RIO PIEDRAS, PUERTO RICO  
March 2010**

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

The proposed WFID auxiliary antenna system is to be mounted with its center of radiation 76.1 meters (250.0 feet) above the ground at the existing tower location and will operate with an effective radiated power of 16.0 kilowatts in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the ground at the base of the tower, the height of an average person, the WFID auxiliary antenna system will contribute  $0.1172 \text{ mw/cm}^2$ .<sup>2</sup> Based on exposure limitations for a controlled environment, 11.7% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 58.6% 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 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 20.0 meters out from the base of the tower and is considered worst case.

The WSKN tower is 125.6 (0.349  $\lambda$ ) in electrical height at the WSKN frequency of 1320 kHz with an operating power of 5.0 kilowatts. The tower is fenced at a minimum distance of 2.0 meters (6.6 feet) from the radiating structure. Based on the guidelines of the OET Bulletin, WSKN deliver an electric field of 203.4 V/m and a magnetic field of 0.623 A/m at the fence perimeters. Due to the operating frequency of WSKN, the controlled and uncontrolled limits are the same. The electric field delivered represents 33.1% of the 614 V/m limit, and the magnetic field delivered represents 38.2% of the 1.63 A/m limit. In this case the magnetic field contribution of 38.2% is considered as worst case scenario.

Combining the contributions of WFID auxiliary and WSKN, a total of 96.8% is reached at the fence perimeter. Since this level for uncontrolled environments is below the 100% limit defined by the Commission, the proposed WFID auxiliary antenna is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Madifide will insure that there are warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Madifide will reduce the power of the proposed 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.