

MINOR CHANGE APPLICATION
NEW AUXILIARY FM ANTENNA
MADIFIDE, INC.
WFID RADIO STATION
CH 239B - 95.7 MHZ - 6.0 KW
RIO PIEDRAS, PUERTO RICO
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EXHIBIT B

Radio Frequency Assessment

At the proposed WFID site, the antenna will be mounted on relatively short tower and will be co-located with AM stations. As such, the use of the worksheets to demonstrate compliance with the radio frequency radiation rules is not possible. Therefore, this 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 stations, specifically WSKN, WUNO auxiliary and LPTV station W25DN, and utilizes the appropriate formulas contained in the Bulletin.³

The WFID auxiliary antenna system will be mounted with its center of radiation 76.05 meters (249.5 feet) above the ground at the existing tower location and will operate with an effective radiated power of 6.0 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the

3) The FM Model program was used to calculate the FM stations' contributions. The EPA single bay dipole was used unless otherwise stated.

tower, the WFID auxiliary antenna system will contribute 0.0440 mw.⁴ Based on exposure limitations for a controlled environment, 4.4% of the allowable ANSI limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, 22.0% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The WSKN tower structure is, electrically, 125.6° at 1320 kHz. A fence is in place limiting access to the radiating structure by a distance no less than 2.0 meters. By reference to the formulas set forth in the Bulletin, WSKN, operating on 1320 kHz at 5.0 kilowatts, would deliver an Electric Field (V/m) of 203.4 V/m at the two meter distance. This is equivalent to 33.1% of the maximum controlled and uncontrolled electric field of 614 V/m. WSKN, operating on 1320 kHz at 5.0 kilowatts, would deliver a Magnetic Field (A/m) of 0.623 A/m at the two meter distance. This is equivalent to 38.2 % of the maximum controlled and uncontrolled magnetic field of 1.63 A/m. The Magnetic Field contribution of 38.2 % is considered worst case.

The authorized WUNO auxiliary tower structure is, electrically, 59.8° at 630 kHz. A fence is in place limiting access to the radiating structure by a distance no less than 2.0 meters. By reference to the formulas set forth in the Bulletin, WUNO, operating on 630 kHz at 0.23 kilowatt, will deliver an Electric Field (V/m) of 235.6 V/m at the two meter distance. This is equivalent to 38.4 % of the maximum controlled and uncontrolled electric field of 614 V/m. WUNO, operating on 630 kHz at 0.23 kilowatt, would deliver a Magnetic Field (A/m) of 0.393

4) This level of field occurs at 20 meters out from the base of the tower and is considered worst case.

A/m at the 2.0 meter distance. This is equivalent to 24.1 % of the maximum controlled and uncontrolled magnetic field of 1.63 A/m. The Electric Field contribution of 38.4 % is considered worst case.

The authorized W25DN Channel 25 antenna system will be mounted with its center of radiation 60.0 meters (196.9 feet) above the ground⁵ at the existing tower location and will operate with an effective radiated power of 15.89 kilowatts in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. As such, the W25DN antenna system radio frequency radiation calculations were made based on an effective radiated power of 0.1589 kilowatts. At two meters, the height of an average person above the ground, at the base of the tower, the W25DN antenna system will contribute 0.0010 mw. Based on exposure limitations for a controlled environment, 0.1% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 0.3% of the ANSI limit is reached at two meters above the ground at the base of the tower.

Combining the contributions of WFID, WSKN, WUNO and W25DN, a total of 98.9% of the uncontrolled environment limit is reached at two meters above ground at the base of the tower. Since this level for uncontrolled environments is well below the 100% limit defined by the Commission, the proposed WFID auxiliary facility is believed to be in compliance with the

5) The center of radiation above ground was based on the authorized height above mean sea level, less the ground elevation above sea level based on the tower registration.

radio frequency radiation exposure limits as is required by the Federal Communications Commission. Further, MI has posted warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, MI 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. Based on the above factors, this proposal is categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.