

NEW FM TRANSLATOR APPLICATION
MUSEUM OF THE HORSE
NEW FM TRANSLATOR STATION
CH 256D - 99.1 MHZ - 0.01 KW
RUIDOSO, NEW MEXICO
July 2003

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(b) 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 KNMB and KIDX, and utilizes the appropriate formulas contained in the OET Bulletin.²

The proposed translator antenna system will be mounted with its center of radiation 15.4 meters (50.7 feet) above the ground at the tower location and will operate with an effective radiated power of 0.01 kilowatt 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 proposed tower, the FM translator antenna system will contribute 0.0022 mw.³ Based on exposure limitations for a controlled environment, 0.2% of the allowable limit is reached at two meters above the ground at the base of the proposed tower. For uncontrolled environments, 1.1% of the limit is reached at two meters above the ground at the base of the tower.

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- 2) The contribution of the FM facility was calculated using the FM Model program. A single bay EPA dipole antenna was used for calculation purposes.
- 3) This level of field occurs at 3.2 meters out from the base of the tower and is considered worst case.

The KNMB antenna system is mounted with its center of radiation 36.5 meters (120.0 feet) above the ground at the tower location and operates with an effective radiated power of 25.0 kilowatts in the horizontal and vertical planes (circularly polarized). The KNMB antenna is a Systems with Reliability FM3/7 seven bay, half wavelength antenna system. The system is similar to a Jampro Double V (FCC/EPA Type #2. At two meters, the height of an average person, above the ground at the base of the tower, the KNMB antenna system contributes 0.0124 mw.⁴ Based on exposure limitations for a controlled environment, 1.2% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 6.2% of the limit is reached at two meters above the ground at the base of the tower.

The KIDX antenna system is mounted with its center of radiation 27.4 meters (90.0 feet) above the ground at the tower location and operates with an effective radiated power of 0.92 kilowatts in the horizontal and vertical planes (circularly polarized). The KIDX antenna is a Systems with Reliability FM3/2 two bay, full wavelength antenna system. The system is similar to a Jampro Double V (FCC/EPA Type #2. At two meters, the height of an average person, above the ground at the base of the tower, the KIDX antenna system contributes 0.0178 mw.⁵ Based on exposure limitations for a controlled environment, 1.8% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 8.9% of the limit is reached at two meters above the ground at the base of the tower.

4) This level of field occurs at 73.6 meters out from the base of the tower and is considered worst case.

5) This level of field occurs at 14.4 meters out from the base of the tower and is considered worst case.

Combining the contributions of the proposed translator, KMNB and KIDX, a total of 16.2% of the uncontrolled limit is reached at two meters above the ground. Since this level for uncontrolled environments is well below the 100% limit defined by the Commission, the proposed translator facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Museum of the Horse (“MOTH”) will ensure warning signs are posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, MOTH 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.