

**MINOR CHANGE APPLICATION**  
**HARRISON RADIO STATIONS, INC.**  
**KCWD RADIO STATION**  
**CH 241C2 - 96.1 MHZ - 50.0 KW (DA)**  
**HARRISON, ARKANSAS**  
**December 2011**

**EXHIBIT B**

**Radio Frequency Assessment**

Since the proposed KCWD antenna is to be mounted on a tower located near an existing AM tower, 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 nearby KNWA, and utilizes the appropriate formulas contained in the OET Bulletin.<sup>1</sup>

The proposed KCWD antenna system will be mounted with its center of radiation 135.9 meters (446.0 feet) above the ground at the proposed tower location and will operate with an effective radiated power of 50.0 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 existing tower, the KCWD antenna system will contribute  $0.1121 \text{ mw/cm}^2$ .<sup>2</sup> Based on exposure limitations for a controlled environment, 11.2% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 56.1% of the limit is reached at 2.0 meters above the ground at the base of the tower.

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- 1) The contributions of the FM facilities were calculated using the FMModel program. A single bay EPA dipole antenna was used for calculation purposes, unless otherwise stated.
  - 2) This level of field occurs at 36.0 meters out from the base of the tower and is considered worst case.

AM station KNWA 1600 kHz, is located at the site at which the proposed KCWD tower will be built. While the stations will not share towers, they are considered co-located for RF calculation purposes. A fence will be placed 4.0 meters out from the base of each tower. KNWA operates a 90° tower on 1600, with a nominal power of 5.0 kilowatts daytime. The KNWA tower delivers an electric field of 35.8 V/m and a magnetic field of 0.447 A/m. As KNWA operates above 1340 kHz, the contributions for controlled and uncontrolled environments differ. For the controlled environment, KNWA provides 5.8% of the electrical limit and 27.4% of the magnetic limit at the fence perimeter. For the uncontrolled environment, KNWA provides 6.9% of the electrical limit and 32.7% of the magnetic limit at the fence perimeter. As the magnetic level in the uncontrolled environment is the highest, it will be considered the worst case value.

Combining the contributions of KCWD and KNWA, a total of 88.8% of the uncontrolled limit is reached at 2.0 meters above the ground at the fence perimeter. Since this level is below the 100% limit defined by the Commission, the proposed KCWD facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, HRS will insure warning signs are posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, HRS 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.