

MINOR CHANGE APPLICATION
CUMULUS LICENSING LLC
WJOD (FM) RADIO STATION
CH 277C3 - 103.3 MHZ - 9.0 KW
ASBURY, IOWA
June 2008

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 co-located WDBQ AM and KLYV FM¹, and utilizes the appropriate formulas contained in the OET Bulletin.²

The proposed WJOD antenna system is to be mounted with its center of radiation 97.0 meters (318.2 feet) above the ground at the tower location and will operate with an effective radiated power of 9.0 kilowatts in the horizontal and vertical planes (circularly polarized). The WJOD antenna is to be FCC/EPA Type 1 eight bay 0.8 wave spaced antenna system.³ At 2.0 meters above the ground at the base of the tower, the height of an average person, the WJOD antenna system will contribute 0.0014 mw/cm².⁴ Based on exposure limitations for a controlled environment, 0.1% of the allowable limit is reached at 2.0 meters above the ground at the base of

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- 1) The existing antenna system will be used for the RF calculations, as the new shared antenna system will deliver a lower contribution
 - 2) The contributions of the FM stations were calculated with the FMModel program. The EPA single bay dipole antenna was used for calculations unless otherwise noted.
 - 3) The proposed WJOD antenna will be shared with KLYV. The new shared antenna will be installed when WJOD implements the herein requested facilities.
 - 4) This level of field occurs at 3.0 meters out from the base of the tower and is considered worst case.

the tower. For uncontrolled environments, 0.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The KLYV antenna system is mounted with its center of radiation 97.0 meters (318.2 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 KLYV antenna is an RCA BFC six bay full wavelength antenna system (FCC/EPA Type 4). At 2.0 meters above the ground at the base of the tower, the height of an average person, the KLYV antenna system contributes 0.0430 mw/cm^2 .⁵ Based on exposure limitations for a controlled environment, 4.3% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 21.5% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The WDBQ AM daytime radiator on which the WJOD/KLYV antenna is to be installed is, electrically, 217.6° in height at 1490 kHz and operates with a power of 1.0 kilowatt. The tower is fenced to not allow access closer than 3.0 meters (9.8 feet) from the base of the tower. At this distance, the WDBQ tower will deliver 126.9 V/m (Electric Field) or 0.073 A/m (Magnetic Field). Since WDBQ operates on a frequency above 1340 kHz, the contribution levels for controlled and uncontrolled environments are different. For the controlled environments, the electrical field contribution is 20.7% and the magnetic field contribution is 4.4%. For the uncontrolled environments, the

5) This level of field occurs at 3.0 meters out from the base of the tower and is considered worst case.

electrical field contribution is 23.0% and the magnetic field contribution is 4.9%. Since the electrical field contribution in the uncontrolled environment is greatest, it will be used as a worst case contribution.

Combining the contributions of WJOD, KLYV and WDBQ, a total of 45.2% of the limit for uncontrolled environments is reached at 2.0 meters from the base of the tower. Since the contribution level is less than the limit for uncontrolled environments, it is believed that the WJOD facility is in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Cumulus will also insure that warning signs have been posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Cumulus 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.