

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR MODIFICATION OF CONSTRUCTION PERMIT APPLICATION TO MAKE CHANGES TO THE AUTHORIZED KVNO-FM AUXILIARY FACILITY.

Kessler and Gehman Associates, Inc., (“KGA”) has been retained by the University of Nebraska Board of Regents (“UNBR”), Omaha, Nebraska in order to prepare engineering studies and the engineering portion of a minor modification of construction permit application requesting FCC authorization to reduce the height of the KVNO-FM auxiliary antenna.

Discussion

UNBR is the licensee of KVNO-FM (BLED-20041013AAU) and is licensed to operate on Channel 214 as a Class C2 Non-Commercial Education FM (“NCE-FM”) station with an ERP of 8.9 kW horizontally and vertically with an antenna height radiation center of 197.0 meters above average terrain (“AAT”) from the KMTV tower site located in Omaha, NE.

UNBR has a construction permit to build and operate an auxiliary FM facility with the FM auxiliary antenna mounted on the KETV tower (BXPED-20040830ACJ). However, UNBR was notified that the auxiliary antenna had to be lowered on the support structure by seventeen feet so that it would not interfere with an obstruction lighting instrument. Therefore, this minor modification application requests FCC authorization to reduce the KVNO-FM auxiliary antenna height radiation center by seventeen feet from the authorized height of 184.7 meters above ground level (“AGL”) to 179.5 meters AGL. As a result of the antenna height reduction, the transmission line length shall also be reduced which results in less attenuation and less transmitter output power as depicted in Exhibits 1 and 2.

Exhibit 4 is an FCC coverage contour map depicting the licensed KVNO-FM F(50,50) 60.0 dBuV/m service contour (black outer contour), the authorized KVNO-FM auxiliary F(50,50)

60.0 dBuV/m service contour (blue middle contour) and the proposed KVNO-FM auxiliary F(50,50) 60.0 dBuV/m service contour (red inner contour). This exhibit demonstrates that the proposed KVNO-FM auxiliary F(50,50) 60.0 dBuV/m service contour would be completely encompassed by the licensed and authorized F(50,50) 60.0 dBuV/m service contours.

Environmental Impact

The proposed operation will have no significant environmental impact as defined in §1.1307 of the FCC Rules. The FM transmitter, 1 5/8-inch (50-ohm) transmission line and antenna system will produce an ERP of 8.4 kW horizontally and vertically. It was determined that the maximum lobe of radiation from the base of the tower out to approximately 3,305.8 feet would occur at approximately 265.6 feet from the base of the tower (640.6-foot radial distance from antenna center). At approximately 265.6 feet from the base of the tower, the depression angle of the main lobe would be 65.5° below the horizontal. At that point, the relative field would be 0.40 and the power density six feet above the ground would be 0.002 mW/cm². This is only 0.24% of the Maximum Permissible Exposure (“MPE”) limits for Occupational/Controlled Exposure and only 1.18% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (“ANSI”). Since the proposed operation of KVNO-FM Channel 214 auxiliary facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the KVNO-FM auxiliary facility would not be considered a “significant contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements. The applicant accepts full responsibility for the elimination of any objectionable interference including that caused by intermodulation to facilities in existence or authorized prior to the grant of this application.

Certification

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications Technical Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.


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