

**Larry H. Will, P.E.**

**Broadcast Engineering**

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1055 Powderhorn Drive  
Glen Mills, PA 19342-9504

PH (610) 399-1826  
E-Mail lhwill@verizon.net

**MBC GRAND CORPORATION**

**APPLICANT FOR A**

**NEW AUXILIARY FACILITY CONSTRUCTION PERMIT**

**KMOZ-FM, CHANNEL 264**

**Grand Junction, Colorado**

**FCC FAC ID 81556**

**NEW AUXILIARY FACILITY CONSTRUCTION PERMIT**

**FCC FORM 301 EXHIBIT 34**

**November 23, 2011**

**MBC GRAND BROADCASTING COMPANY, INCORPORATED**  
**APPLICATION FOR A NEW AUXILIARY FACILITY CONSTRUCTION PERMIT**  
**FOR KMOZ-FM**  
**Grand Junction, Colorado**  
**FCC FAC ID 81556**

**FCC FORM 301 - ENGINEERING EXHIBIT 34**

**ENVIRONMENTAL STATEMENT**

The instant application is excluded under 1.1306. The instant application is excluded under 1.1306. The proposed NEW auxiliary facility for KMOZ-FM, Channel 264 is one of several FM and television broadcast antennas at the station location required to be considered by 47 CFR 1.1307(b).

MBC Grand Broadcasting already operates KMGJ, KMOZ-FM and KMOZ-FM from this site. Using the guidelines in Appendix B of FCC OET 65, the multi user transmitter site is in a very remote and rugged area and meets the OET-65 requirements of "a remote area not likely to be visited by the general public"<sup>1</sup>. Therefore the requirements for compliance with the uncontrolled/general public limits may be accomplished by posting RFR warning signs at the perimeter of each of the small areas where measured exposure levels exceeded the guidelines.

The KMOZ-FM auxiliary antenna is mounted on the same tower<sup>2</sup> with the KMOZ-FM main antenna. As part of the installation process, the applicant will make new RFR

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<sup>1</sup> The various site users jointly have an agreement to conduct periodic RFR measurements to insure compliance. These facts were noted in MBC Grand's previous application for KBFE (now KMOZ-FM), in which outlined the remoteness of the site and the measurement requirements. The FCC granted the KBFE Construction Permit and covering License with only a Condition to cooperate to reduce power as necessary for access to the tower. The 1998 RFR Report (See Footnote 3 below) included with the KBFE modification application showed that the existing stations required to be studied under 1.1307(b) resulted in the combined existing transmitters causing no exposure levels on the ground or in the transmitter building exceeding the allowable 1.0 mW/cm<sup>2</sup> for workers/controlled environment. A small area near the tower and at two of the three guy anchors did measure slightly over the limits for uncontrolled/general public exposure.

<sup>2</sup> This tower has been registered with the commission.

measurements based on existing background and then adding in the new facility to determine the actual impact on the RF environment, if any.

Based on previous RFR measurements submitted with the KBFE application for Construction Permit<sup>3</sup> and using the procedures outlined in OET Bulletin 65, Edition 97-01 with Supplement A and specifically Equation 10, Page 22 and Appendix B of OET 65 and Figure 11 of Supplement A, I have evaluated the RFR energy from the antenna system of proposed KMOZ-FM Auxiliary transmitter as follows:

Using the guidelines in Appendix B of OET 65, the KMOZ-FM Auxiliary transmitter site is in a very remote and rugged area and meets the requirements of "a remote area not likely to be visited by the general public". Therefore the requirements for compliance with the uncontrolled/general public limits may be accomplished by posting RFR warning signs at the perimeter of each of the small areas where measured exposure levels exceeded the guidelines. The commission has previously acknowledged this fact by granting the KBFE applications for both a Construction Permit and covering License.

With this application, KMOZ-FM Auxiliary on Channel 264 is proposing an ERP of 1.19 kilowatts H-Pol and 0.53 kilowatts V-Pol (1.72 kW total ERP). The proposed KMOZ-FM Auxiliary transmitting antenna is a combination of stacked array of a Scala YA-7 H-Pol only oriented to 135 degrees True combined with a Scala CA-5-FM/CP/PC single bay "yagi" style CP directional antenna mounted 1 wavelength above the YA-5 and oriented to 90 degrees True. The antenna combination results in a medium gain unit with a power gain of 5X side mounted with the C/R at 17 meters up the tower (lowest element is at least 12.5 meters above head height). Utilizing Equation 10, Page 22, and taking into account the Scala published elevation patterns for the CA-5 and the Scala YA-7 published elevation patterns and including the circularly polarized energy, the maximum expected downward radiation (greater than -30 degrees) from the two bay antenna on the tower is approximately 0.5x field or 0.43 kW. Therefore the calculated required occupational/controlled physical separation is approximately 3.8 meters. Again utilizing Equation 10, Page 22, the required minimum spacing for the general public/uncontrolled environment is 8.5 meters. Since the lowest part of the antenna is 14.5 meters above ground, the height of the structure limits the possible excessive radiation values from KMOZ-FM Auxiliary to at least 6 meters above head height at the ground. At 2 meters above ground, the calculated RFR level from the KMOZ-FM Auxiliary antenna is 92 uW/cm<sup>2</sup> or 46% of the OET allowable level for the general public/uncontrolled environment.

Therefore the addition of KMOZ-FM Auxiliary on Channel 222 with a total ERP of 1.72 kilowatts and with the lowest antenna element at least 12.5 meters above head height at ground level, total levels of the KMOZ-FM Auxiliary RFR energy at all points will not increase significantly from that presently recorded in the most recent RFR Report. The addition of the KMOZ-FM Auxiliary is predicted to result in no more 46% additional RFR energy in area(s) receiving levels in excess of that allowed for the general public/uncontrolled environment extending around the tower base out to approximately 8 meters.

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<sup>3</sup> See RFR Measurement Report from "Application for A Minor Amendment to a Pending Application", Page 10, by MBC Grand Junction, FCC File Number BPH-960405MK dated March 25, 1998.

The site therefore, with proper posting of RFR signs, will remain in compliance with 1.1307(b) with the proposed addition of the KMOZ-FM Auxiliary.

In addition, as a precaution to employees, a suitable signs are posted at the base of the tower supporting the KMOZ-FM Auxiliary facility alerting maintenance personnel to the presence of radiofrequency energy so that appropriate action can be taken when access on the tower above approximately 6 meters above ground is required during periods when the instant auxiliary facility is operating.

Also, even though the applicant owns the tower, not all broadcast transmitters, that are co-located on the site, are owned by the applicant. The applicant further states that during periods of maintenance where workers on the tower could be exposed to excessive levels of RFR energy, any transmitting system that could pose a hazard will be either turned off or reduced in power to insure that workers are not subject to excessive values of RFR energy and that periodic RFR measurements will be conducted to insure both worker safety and that the actual perimeter of high RFR energy areas will be posted with suitable warning signs.

With these procedures in place, we believe the proposed modification of the existing KMOZ-FM Auxiliary will be in compliance with the RFR energy protection requirements of 47 CFR 1.1307(b). As stated above, as part of the installation process, the applicant will make new RFR measurements based on existing background and then adding in the new facility to determine the actual impact on the RF environment, if any.

## **BLANKETING INTERFERENCE**

The area surrounding the proposed site is an uninhabited mountaintop; therefore, no blanketing interference is anticipated. However, the applicant will investigate and cure any complaints reported within the blanketing area. There are no AM facilities within 3.2 KM.