

FEDERAL COMMUNICATIONS COMMISSION
445 TWELFTH STREET SW
WASHINGTON DC 20554

MEDIA BUREAU
AUDIO DIVISION
APPLICATION STATUS: (202) 418-2730
HOME PAGE: www.fcc.gov/mb/audio

ENGINEER: Joseph Szczesny
TELEPHONE: (202) 418-2724
FACSIMILE: (202) 418-1410
E-MAIL: Joseph.Szczesny@fcc.gov

JUN 25 2018

Richard P. Bott, II, VP
Bott Communications, Inc.
10550 Barkley, Suite 108
Overland Park, KS 66212

Re: Bott Communications, Inc. (BCI)
WCRT(AM), Donelson, Tennessee
Facility Identification Number: 25031
File Number: BP-20100126AEA

Dear Mr. Bott:

This letter is in reference to: the minor change application filed to increase the daytime input power from 22 kW to 42 kW utilizing the licensed non-directional (ND) efficiency; and the July 29, 2010, amendment.

Background. WCRT(AM) is presently authorized to operate ND daytime with a nominal power of 50 kW with a restricted antenna efficiency of 282.2 mV/m/km at 1kW, which is equivalent to a power of 22 kW with an unrestricted antenna efficiency of 425.4 mV/m/km at 1 kW. In the application, BCI seeks to increase the daytime power from 22 kW to 42 kW, with no change to the nighttime operation. In support of its request, BCI claims that the antenna efficiency is lower than the licensed value because the transmitter site is located on a metalworking waste landfill; BCI submitted measurement data to show that the measured antenna efficiency was approximately 303.9 mV/m/km at 1kW;¹ and BCI requests that the antenna input power be increased to 42 kW to compensate for the reduced measured efficiency. We note that this proposal is very similar to the application BZ-20070308AGF to increase input power from 22 kW to 48 kW, which was dismissed by our staff on May 15, 2009.²

¹ The original application specified a nominal power of 50 kW and an efficiency of 303.9 mV/m/km/kW, which was found to be unacceptable due to increased daytime interference to stations WKCM(AM), WQRT(AM), and WLOC(AM) in violation of Section 73.37(a) of the Commission's rules. Thus, the application was amended on July 29, 2010, to specify no change to the licensed 50 kW nominal power or the old restricted licensed efficiency value of 282.2 mV/m/km/kW.

² The Commission's May 15, 2009, dismissal letter rejected BCI's measurement data analysis on the basis that the ND antenna efficiency was analyzed to be 1882 mV/m at 22 kW (or 401.2 mV/m at 1kW), not significantly different from the theoretical efficiency of 1995.6 mV/m(or 425.5 mV/m/km at 1kW).

In the application, BCI contends that field strength measurements should be utilized to establish the antenna efficiency because: 1) the top-loaded tower is not a simple antenna, and therefore calculation of the antenna efficiency based on Figure 8 of Section 73.190 is questionable for this case;³ 2) the reduced efficiency is not caused by deficiencies in the antenna system; 3) the Commission had previously granted similar requests for stations WMIX(AM), and WRHL(AM); 4) the Commission accepted measurements from WMBI(AM) for the establishment of efficiency, where the efficiency of the ND antenna was in question; and 5) the field strength measurements conducted on nearby station WENO(AM), Nashville, Tennessee, confirms the ground conductivity near the WCRT(AM) transmitter site is approximately 4 mmhos as also established by the measurements submitted in this application for station WCRT(AM).

Discussion. We disagree with BCI's arguments to justify the grant of increased input power for the following reasons: 1) the Commission considers top-loaded antennas to be simple antennas for which Figure 8 can be used to calculate the estimated efficiency; 2) the two cases that BCI cited, WMIX(AM) and WRHL(AM), operate with DA antennas, not ND as in this case, and both were allowed to increase input power pursuant to Public Notice *The Application Process and The Use of Non-discrete Power Levels for AM station*, released on October 11, 1985;⁴ 3) the WMBI(AM) case did involve a top-loaded ND antenna, but the submitted field measurements established that the station's lower efficiency was caused by deficiencies in the antenna system (due to removal of a resistor and changes to the slant wire feed); 4) as mentioned in the Commission's May 15, 2009, dismissal letter, our analysis of the measurement data found the antenna efficiency was approximately 1882 mV/m/km for 22 kW (401.2 mV/m/km for 1kW) with soil conductivities varying from 1.5 mmhos to 5 mmhos, not significantly different from the theoretical efficiency of 1995.6 mV/m/km for 22 kW (or 425.5 mV/m/km for 1KW) as derived using the Figure 8 of Section 73.190 of the Commission's rules. In addition, a further analysis of the updated measurements submitted in the application shows the efficiency to be 1974.4 mV/m for 22 kW, and we note that BCI did not submit a request to increase the nighttime input power in this application which indicates no negative effects were caused by the landfill on the nighttime directional antenna system; and 5) we note that the application was unacceptable as originally filed. Pursuant to the October 11, 1985 Public Notice, we do not permit ND stations to have "restricted" antenna efficiency, therefore the proposed ND antenna input power and nominal power should be identical. As a result, this application should have specified a nominal power level of 42 kW and the measured efficiency of 303.9 mV/m/km.

³ Figure 8 is used to calculate the antenna efficiency of a simple omni-directional antenna with a standard ground system (120 radials and quarter wavelength), or using ground system correction factors (if a deficiency ground system using less than 120 radials and/or quarter wavelength).

⁴ In the Public Notice, the Commission allows a station to adjust its input power upward in the "situations where a newly constructed directional antenna has been completed, and a license application has been submitted and it is demonstrated, based upon proof data, that the antenna system, due to its intrinsic shortcomings, does not perform to the level expected..."

Conclusion. Based on the foregoing, the BCI application (File Number: BP-20100126AEA) IS HEREBY DISMISSED as unacceptable for filing.⁵

Sincerely,



Son Nguyen
Supervisory Engineer
Audio Division
Media Bureau

cc: Kathleen Victory, Esq. (via e-mail only)
Jeremy Ruck, DLM (via e-mail only)

⁵ In the Public Notice entitled "Commission States Future Policy on Incomplete and Patently Defective AM and FM Construction Permit Applications", FCC 84-366, released August 2, 1984, the Commission indicated that it would reinstate applications nunc pro tunc where the original application was returned and where a relatively minor curative amendment was filed in conjunction with a petition for reconsideration within 30 days of the date of the dismissal. Any amendment filed later than 30 days will be returned as untimely. See 47 U.S.C. § 405, 47 CFR § 1.106(f). In this regard, it should be emphasized that the above deficiencies were discerned after a preliminary study of the application. A detailed review was not made of the entire application to determine whether other deficiencies exist which would preclude acceptance for filing or result in a subsequent dismissal. Inasmuch as the applicant will not be afforded a second opportunity to correct another deficiency, the applicant is encouraged to carefully review the entire application.