

MINOR CHANGE APPLICATION
CRS RADIO HOLDINGS, INC.
WHGM AM RADIO STATION
1330 kHz - 0.023/5.0 kW - NDU
HAVRE DE GRACE, MARYLAND
August 2017

EXHIBIT #3

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 stations and utilizes the appropriate formulas contained in the OET Bulletin.¹

At the WHGM frequency of 1330 kHz, the tower is 121.7° (0.34λ) in electrical height. The tower is fenced at a minimum distance of 4.6 meters (15 feet) from the radiating structure. Based on the RF Worksheet #2, the AM the tower should be fenced at a minimum distance of 2.0 meters from the tower base. Since the tower is fenced at a distance of 4.6 meters, this proposal and operation is assumed to be in compliance with FCC guidelines. CRS Radio 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, CRS Radio 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.

1) The contributions of the FM facilities were calculated using the FMModel program. A single bay EPA dipole antenna was used for calculation purposes. In cases where the number of bays of the antenna was known, this data was used in the FMModel program.

RF WORKSHEET #2: AM

PLEASE COPY THIS WORKSHEET PRIOR TO USING. IN THE CASE OF A MULTIPLE TOWER ARRAY, A COPY IS NECESSARY FOR EACH TOWER LISTED IN RF WORKSHEET #2a. See AM Instruction b. to "How to Use RF Worksheets" on page 5 Appendix A.

SINGLE TOWER

Enter the transmitted power 5.0 kW (1)
Enter the distance from the tower to the nearest point of the fence or other
restrictive barrier enclosing the tower 4.6 m (2)

DETERMINATION OF WAVELENGTH

Method 1: Electrical Height

The tower height in wavelength may be obtained from the electrical height in degrees of the radiator.

Electrical height of the radiator 121.7 degrees (3a)
Divide Line 3(a) by 360 degrees 0.34 wavelength (3b)

Method 2: Physical Height

Alternatively, the wavelength may be obtained from the physical height of the radiator above the tower base and the frequency of the station.

Overall height of the radiator above the tower base m (4a)
List the station's frequency kHz (4b)
Divide 300,000 by Line (4b) m (4c)
Divide Line (4a) by Line 4(c) wavelength (4d)

REQUIRED RESTRICTION DISTANCE

Use the appropriate AM fence distance table based on the wavelength determined in either Line (3b) or Line (4d) above. If the transmitted power is not listed in the table, use next highest value (e.g., if the transmitted power is 2.5 kW, use the fence value in the 5 kW column).

List the fence distance obtained from the appropriate table 2.0 m (5)

Is the value listed in Line (5) less than or equal to the value listed in Line (2)? ☒ Yes ☐ No (6)

If Line (6) is "Yes," are warning signs posted at appropriate intervals which describe the nature of the potential hazard? ☒ Yes ☐ No (7)

IF EITHER LINE (6) OR LINE (7) WAS ANSWERED "NO", you may need to prepare an Environmental Assessment. However, in order to determine the need for such an Assessment please see the NOTE on page 5 of Appendix A. If after consideration of such factors as the antenna radiation pattern, measurement data and the barriers which restrict access you conclude that an Environmental Assessment is required, please see Section I of the instructions to this worksheet entitled "Environmental Assessment."

IF BOTH LINE (6) AND LINE (7) WERE ANSWERED "YES", it appears that this tower complies with the FCC guidelines with respect to the general public. Please be aware, that each site user must also meet requirements with respect to "on-tower" or other exposure by workers at the site (including RF fields caused by other facilities, tower or towers). These requirements include, but are not limited to the reduction of access to the site, tower, or antenna. See OET Bulletin 65 for more details.

EXHIBIT #3a
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