

Engineering Exhibit
AMFM Radio Licenses, L. L. C, as Debtor in Possession
WHFX(FM) – Darien, GA - FID 63431
Application to Modify License BLH-19990310KF

The applicant requests modification of license BLH-19990310KF following replacement of the WHFX(FM) main antenna (non-directional) and to make minor corrections to the antenna height and geographical coordinates. The WHFX(FM) main antenna is mounted on a tower (ASR 1020860) with an overall height of 152 meters above ground level.

All proposed changes meet the requirements of section 73.1690(c) of the FCC Rules.

	Horizontal	Vertical
Effective radiated power (kW)	50	50
Maximum effective radiated power (kW)	50	50
Height of radiation center above mean sea level (meters)	146	146
Height of radiation center above ground level (meters)	143	143
Height of radiation center above average terrain (meters)	143	143

Site Coordinates (NAD27) Latitude: 31° 10' 9.9" N
Longitude: 81° 32' 15.7" W

RF Radiation Compliance
WGIG(AM), Brunswick, GA (FID#63432)
WHFX(FM), Darien, GA (FID#63431)

The facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65 “Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation”.

Facilities:

WGIG(AM) is licensed for 1440 kHz with 5.0 kW non-directional daytime and 1.0 kW nighttime operation utilizing a 3-tower directional antenna system. All three WGIG(AM) radiators are series-fed guyed towers with an electrical height of 101 degrees at 1440 kHz. The WHFX(FM) antenna is mounted on a 152 meter tower located adjacent to the WGIG(AM) antenna array. WHFX(FM) is licensed for an ERP (H & V) of 50 kW and utilizes an ERI 5-bay, full-wave spaced antenna (EPA Type 3) with a Center of Radiation of 143 meters above ground.

AM Power Density Prediction Method:

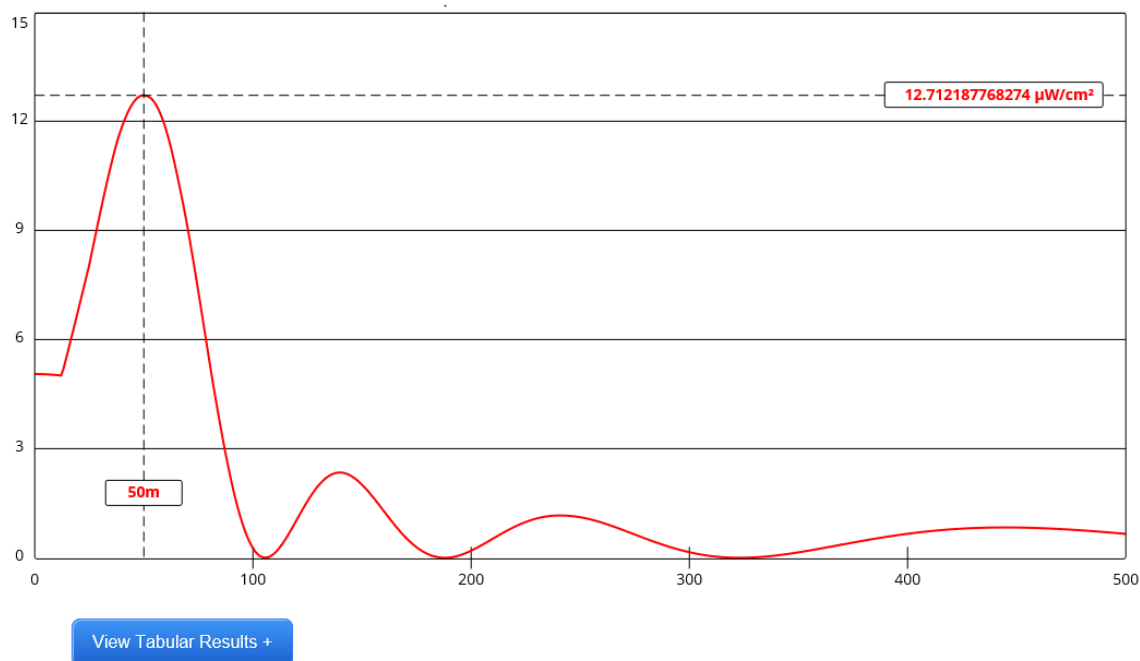
To determine the level of RF exposure attributable to WGIG(AM), Figures 2 & 3 of “Supplement A (Edition 97-01) to OET Bulletin 65 (Edition 97-01)” were used to determine the predicted E-field and H-field values at the nearest point on the fence that surrounds any of the three towers for a power level of 1.0 kW. The minimum distance from the WGIG(AM) radiator to the nearest

point on any of the tower fences is 2.7 meters which occurs at Tower 3(W). The electrical height of the WGIG(AM) radiators is 101.0 degrees, which falls in between the electrical heights specified in Figures 2 & 3. Rather than interpolating the predicted E-field and H-field values at a distance of 2.7 meters, the higher predicted E-field value of 135 V/m for a 180-degree radiator and the higher predicted H-field value of 0.31 A/m for a 90-degree radiator were assumed to provide a more conservative RF Exposure prediction. These values must be multiplied by the square root of 5 to reflect the maximum WGIG(AM) power level of 5.0 kW.

FM Power Density Prediction Method:

To determine the level of RF exposure attributable to WHFX(FM), the on-line version of the FCC's FM Model computer program was used. A total of 500 data points were utilized over a total distance of 500 meters from the tower. This distance was deemed sufficient since the power density decays to an extremely small level beyond this distance. Figure 1 shows the power density computed by the FM computer model for WHFX(FM). The maximum RF power density of 12.7 $\mu\text{W}/\text{cm}^2$ is predicted to occur at 50 meters from the tower base.

Figure 1



Channel Selection	Channel 250 (97.9 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	143	Distance (m)	500
ERP-H (W)	50000	ERP-V (W)	50000
Num of Elements	5	Element Spacing (λ)	1
Num of Points	500	Apply	

General Population/Uncontrolled Exposure:

The maximum predicted E-field level attributable to WGIG(AM) is 301.9 V/m, which represents a Plane-wave equivalent power density of 24.2 mW/cm², or 27.9 % of the General Population/Uncontrolled exposure limit of 86.80 mW/cm² (180/f² mW/cm²) at a frequency of 1440 kHz. The maximum predicted H-field level attributable to WGIG(AM) is 0.69 A/m, which represents a Plane-wave equivalent power density of 18.1 mW/cm², or 20.9 % of the exposure limit. The maximum RF exposure level attributable to WHFX(FM) of 12.7 uW/cm² is predicted to occur at a distance of 50 meters from the base of the tower. This value is 6.4 % of the General Population/Uncontrolled Exposure Limit of 0.2 mW/cm² for frequencies from 30-300 MHz. Even though the maximum exposure levels attributable to WGIG and WHFX are predicted to occur at significantly different locations, a worst-case exposure level can be assumed by adding the maximum exposure level percentages of 27.9 % (WGIG E-field) and 6.4 % (predicted amount attributable to WHFX), which totals 34.3 % of the General Population/Uncontrolled Exposure limit. The gates to the fences surrounding the towers is securely locked and RF Radiation Warning Signs are conspicuously posted warning of the potential hazard. Therefore, WGIG and WHFX are believed to comply with OET Bulletin 65 Edition 97-01 with regard to General Population/Uncontrolled Exposure.

Occupational/Controlled Exposure:

The maximum predicted E-field level attributable to WGIG(AM) is 301.9 V/m, which represents a Plane-wave equivalent power density of 24.2 mW/cm², or 24.2 % of the Occupational/Controlled exposure limit of 100 mW/cm² at frequencies from 300 kHz to 3.0 MHz. The maximum predicted H-field level attributable to WGIG(AM) is 0.69 A/m, which represents a Plane-wave equivalent power density of 18.1 mW/cm², or 18.1 % of the exposure limit. The maximum RF exposure level attributable to WHFX(FM) of 12.7 uW/cm² is predicted to occur at a distance of 50 meters from the base of the tower. This value is 1.3 % of the Occupational/Controlled Exposure Limit of 1.0 mW/cm² for frequencies from 30-300 MHz. Even though the maximum exposure levels attributable to WGIG and WHFX are predicted to occur at significantly different locations, a worst case exposure level can be assumed by adding the maximum exposure level percentages of 24.2 % (WGIG E-field) and 1.3 % (predicted amount attributable to WHFX) which totals 25.5 % of the Occupational/Controlled Exposure limit. The gates to the fences surrounding the towers is securely locked and RF Radiation Warning Signs are conspicuously posted warning of the potential hazard. Therefore, WGIG(AM) and WHFX(FM) are believed to comply with OET Bulletin 65 Edition 97-01 with regard to Occupational/Controlled Exposure.



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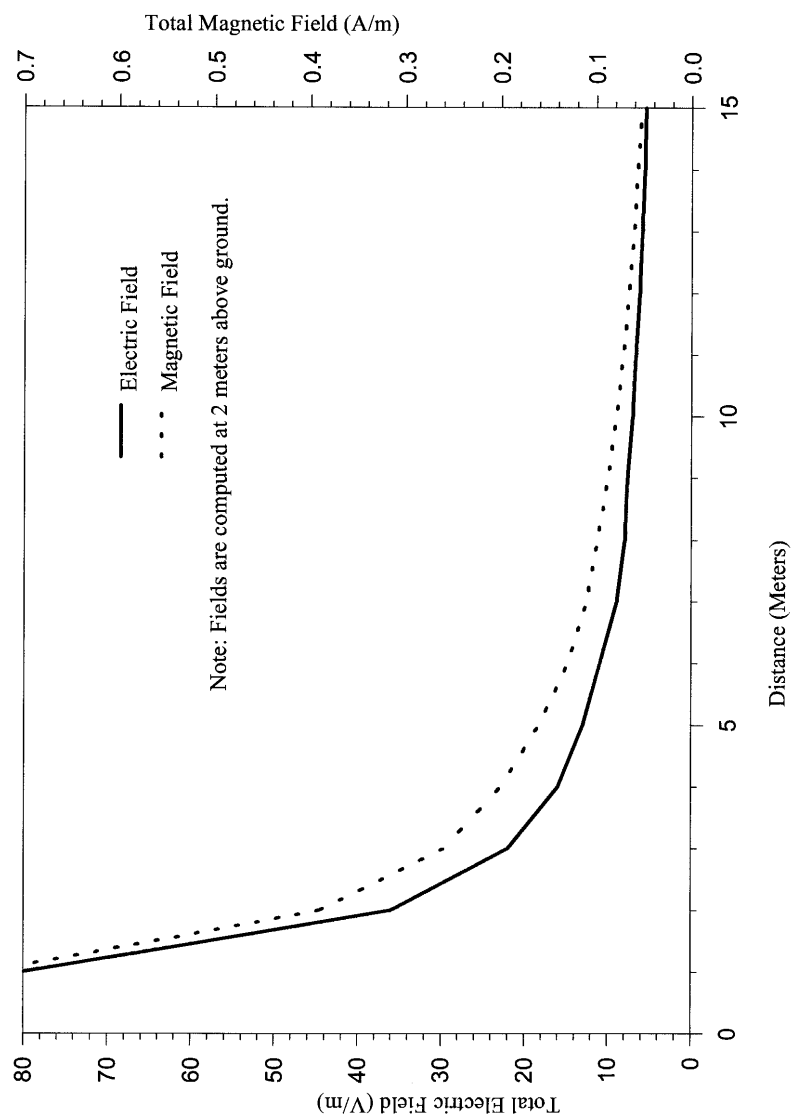


Figure 2. MININEC AM Model for 1 kW, 0.25 Wavelength Tower

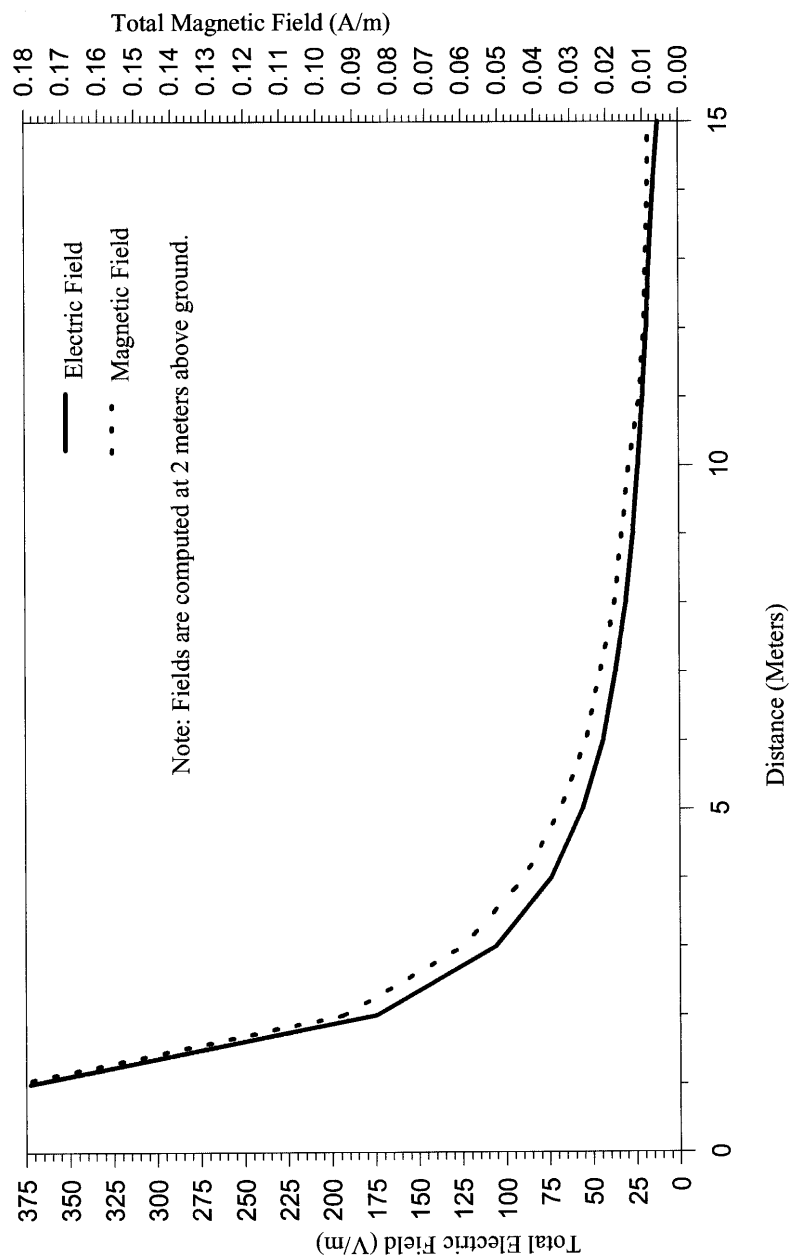


Figure 3. MININEC AM Model for 1 kW, 0.5 Wavelength Tower