

## **WBBQ-FM Comprehensive Engineering Exhibit**

### **Minor Change Application**

**August 9, 2011**

This minor change application seeks to relocate WBBQ-FM to a location 411 meters above ground level on a tower identified by Registration Number: 1019723 using a directional antenna to prevent prohibited contour overlap and spaced in accordance with Section 73.215 with 100 kW ERP.

Attached below as *Figure 1* is a spacing study utilizing Section 73.207 distances, from which it can be determined that the proposed location will be "short spaced" to the facilities of WRBX and WAJQ-FM. Also below *Figure 2* is a contour map demonstrating no prohibited contour overlap will exist with these facilities when the proposed antenna pattern is utilized at the proposed height and power.

The proposed 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."

The proposed antenna system is an ERI "Roto-Tiller" type, 6- element, full-wave spaced. antenna mounted 411 meters above ground. For purposes of this analysis the FM Model program has been set to calculate values for this type of antenna element array, operated with an effective radiated power of 100.0 Kilowatts in both the horizontal and vertical planes. At 2 meters above the surface, at 130 meters from the base of the tower, this proposal will contribute worst case, 2.7 microwatts per square centimeter, or 0.27 percent of the allowable ANSI limit for controlled exposure, and 1.35 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

**Figure 1**

C0 Spacing Report at ASR 1019723 282C0							
Call Sign	Chanl	Class	Status	Dist_km	207 Sep	Clr	Spacing
WBBQ-FM	282	C0	LIC	23.16	270	-246.8	This Fac
WAJQ-FM	282	A	LIC	211.87	215	-3.1	Use 73.215
WRBX	281	A	LIC	150.44	152	-1.6	Use 73.215
WAJQ-FM	282	A	LIC	216.53	215	1.5	
WRFQ	283	C1	LIC	198.53	196	2.5	
WRFQ	283	C1	LIC	198.53	196	2.5	

**Figure 2.**

