

## **Comprehensive Engineering Exhibit**

**WFUS, Facility ID No.: 63984**

**August 24, 2010**

This application seeks a change in antenna location for WFUS. The proposed antenna is to be a shared use facility located 467 meters above ground level upon a tower identified by registration number 1057473. The maximum effective radiated power is to be 68 kilowatts, and the effective radiated power is to be 65 kilowatts.

From this location as WFUS will be fully spaced to all other facilities, applications, and allocations. At this location the antenna will be 490.5 meters above sea level. The FCC provided "HAAT Calculator" was used to determine the height above average terrain ("HAAT") using 8 radials over "30" second terrain to be 472 meters. The FCC web tool "FM power" was used to arrive at a C0 equivalency determination for this height of 85 kW, thus this application is compliant.

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 to be a Dielectric "FMV" 8 bay, antenna, with a spacing of 0.91 wavelengths at the stations frequency of operation, mounted 467 meters above ground. For purposes of this analysis the FM Model program has been set to calculate values for a "worst case" element of a "Ring Stub" EPA type 1, 8- bay, 0.91 wave spaced, antenna mounted with its center of radiation height of 467 meters, and operating with an effective radiated power of 68.0 Kilowatts in both the horizontal and vertical planes. At 2 meters above the surface, at 5 meters from the base of the tower, this proposal will contribute worst case, 1.25 microwatts per square centimeter, or 0.13 percent of the allowable ANSI limit for controlled exposure, and 0.65 percent of the allowable limit for uncontrolled exposure. This figure is less than 5 percent 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.

**Table 1.**

Antenna Location ComStudy 2.2 search of channel 278 (103.5 MHz Class C0) at 27-49-09.7 N, 82-15-38.7 W.									
Callsign	State	City	Chal	ERP_w	Class	Status	Dist_km	Sep	Clr
WFUS	FL	GULFPORT	278	98000	C0	LIC	2.54	270	-267.5
WQOL	FL	VERO BEACH	279	50000	C2	LIC	177.98	176	2.0
WMIB	FL	FORT LAUDERDALE	278	98000	C	LIC	289.22	281	8.2
WMIB	FL	FORT LAUDERDALE	278	57980	C	LIC	289.22	281	8.2