

Comprehensive Engineering Exhibit
WNUS(FM) Facility ID 67465
Minor Change Application
April 6, 2009

By this application it is sought to modify the facility of WNUS(FM) to specify a new antenna location, height, and power. It is proposed that WNUS(FM) share the antenna of co-owned station WDMX. This antenna is non-directional and located 55 meters above ground level upon a tower described by antenna structure registration number 1034106.

From this location WNUS(FM) is fully spaced as a Class A facility in accordance with Section 73.207 to all known facilities, applications and allocations, as indicated in Table 1 below. The proposed facility is at a Height Above Average Terrain (HAAT) 34 meters greater than maximum for Class A stations, the web tool "FMpower" was utilized to determine the equivalent power of 3.40 kW.

While this tower location is just 2.8 km from the directional array of standard band station WLTP, the addition of WNUS to the existing WDMX transmission system will have no impact upon this array. No changes of antenna or transmission line are required. No modifications to the existing tower are necessary.

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 EPA type 2, 2-bay, 0.5 wave spaced "Jampro Double V" style antenna, mounted with its center of radiation 55 meters above ground level. This proposal will operate with a **combined** effective radiated power of 5.05 kilowatts in both the horizontal and vertical planes. At 2 meters above ground, at 98 meters from the base of the tower, this proposal will contribute worst case 12.6 microwatts per square centimeter, or 1.26 percent of the allowable ANSI limit for controlled exposure, and 6.3 percent of the allowable limit for uncontrolled exposure.

It is therefore believed that this proposal in its entirety 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 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.

ComStudy 2.2 search of channel 296 (107.1 MHz Class A) at 39-20-18.0 N, 81-30-01.0 W.

Callsign	State	City	Chanl	ERP_w	Class	Status	Dist_km	Sep	Clr
WYBZ	OH	CROOKSVILLE	297	3000	A	LIC	71.53	72	-0.47
WKAZ-FM	WV	MIAMI	297	23500	B	LIC	118.21	113	5.21
WNKK	OH	CIRCLEVILLE	296	3200	A	LIC	121.7	115	6.7
WNKK	OH	CIRCLEVILLE	296	3000	A	LIC	121.7	115	6.7
WBKS	OH	IRONTON	296	3100	A	LIC	134.85	115	19.85
WWLW	WV	CLARKSBURG	293	28000	B	LIC	89.54	69	20.54
WBKS	OH	IRONTON	296	3000	A	LIC	135.09	115	20.09
WEAK-LP	OH	ATHENS	294	100	LP100	LIC	57.56	29	28.56
WSEO	OH	NELSONVILLE	299	3000	A	LIC	63.39	31	32.39
WEGW	WV	WHEELING	298	16000	B	LIC	102.75	69	33.75