

## 250-Mile Window Application Minor Modification of Permit: W254CN, BNPFT-20160129AFQ Facility ID No: 138368

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This exhibit is for minor modification of translator permit for W254CN Facility ID No. 138368, BNPFT-20160129AFQ. It specifies changes of location of approximately 1.5 miles, a change of antenna type, and elevation. The facility will continue to be a fill in translator for AM Class C station WBIZ Facility ID 2107 Eau Claire, Wisconsin.

### **Antenna Location**

The proposed antenna is to be mounted on an existing tower identified by registration number 1033663 at 247 meters above ground. Below as **Figure 1** is an overlap and spacing study from which it can be determined that this proposal is within the protected contour of, **third** adjacent channel station WISM-FM.

### **73.1204 Compliance**

We will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second or third adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents near the proposed translator antenna location.

*Concerning WISM-FM*; which is predicted to have 100 dBu signal at the protected facility. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 140 dBu (100 + 40) in a habitable/populated area. Utilizing the line of sight equation it has been determined that a 100 dBu signal developed by 250 watts, as proposed, will not reach any habitable areas as can be seen in **Figure 3**, an image of the proposed antenna tower.

### **Fill-in and Minor Change Status**

This proposal is to serve as a fill-in translator for station WBIZ, Facility ID 2107, Eau Claire, Wisconsin. The map of **Figure 4** demonstrates that the proposed 60 dBu contour is contained within the 2 mV/M signal and a 25 mile radius of the WBIZ facility. It can also be seen that the proposed and permitted facilities have contour overlap.

### **RF Fields Statement**

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

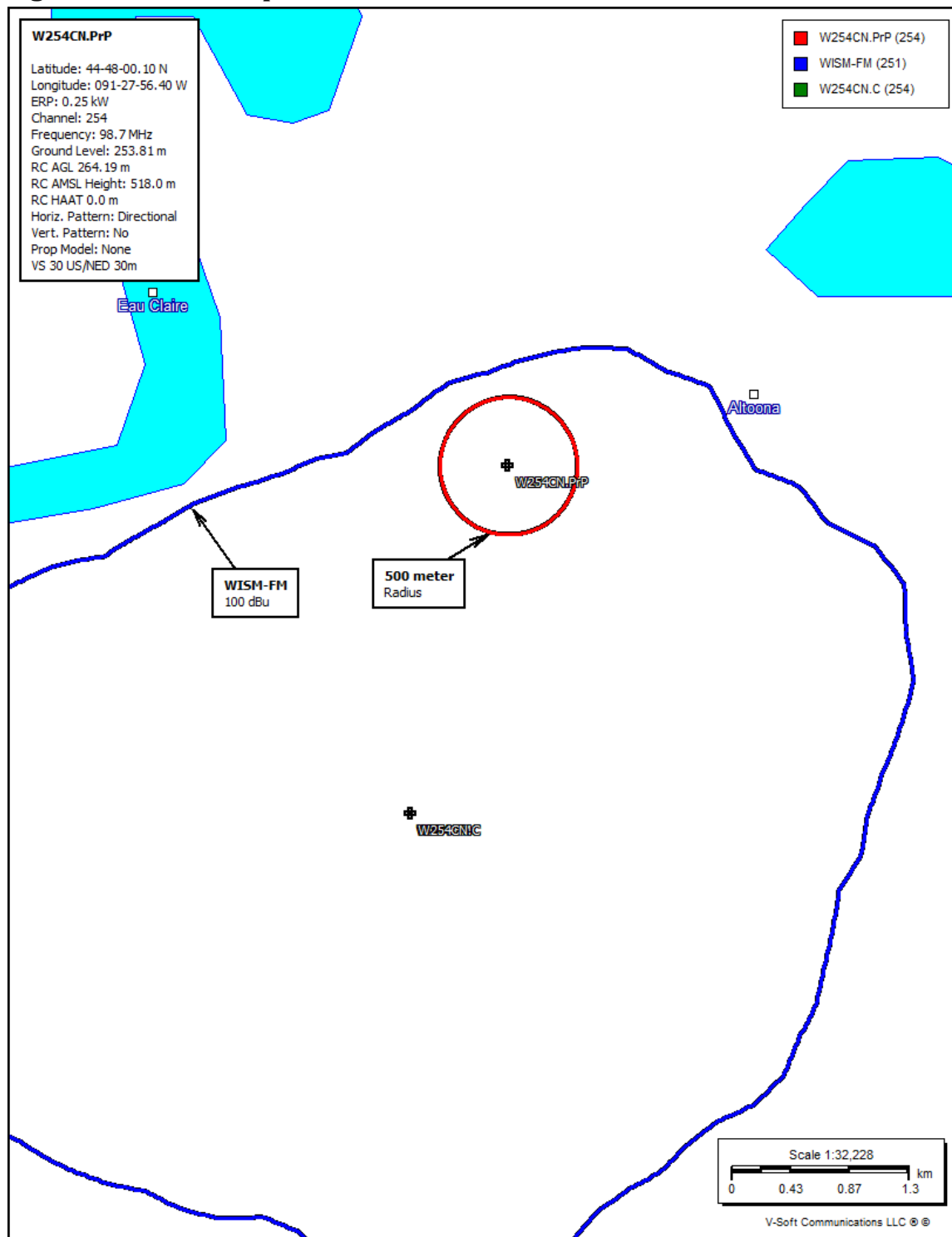
The proposed antenna system is a Scala FMV-MP a one (1) element, vertical polarity antenna, mounted 247 meters above ground. As this element type is not modeled in any current RF Fields calculation computer program, for purposes of this analysis the FM Model RF Fields program has been set to calculate values for an array of "worst case" type of antenna element(s) "Ring Stub", operated with an effective radiated power of 0.25 Kilowatts in the Vertical plane. At 2 meters above the surface, at 56.4 meters from the base of the tower, this proposal will contribute worst case, 0.132 microwatts per square centimeter, or 0.01 percent of the allowable ANSI limit for controlled exposure, and 0.05 percent of the allowable limit for uncontrolled exposure. This figure is less than 5.0% 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 5.0% 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. Overlap and Spacing Study**

W254CN at Gray TV tower ASR 1033663 Amfm Radio Licenses, L.L.C.											
REFERENCE 44 48 00.1 N. 91 27 56.4 W.		CH# 254D - 98.7 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 518 M Average Protected F(50-50)= 7.09 km Standard Directional							DISPLAY DATES DATA 04-21-16 SEARCH 04-21-16		
CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
254D	W254CN	CP	_C_	195.7 15.6	2.63 BMPFT20160129AFQ	44 46 38.0 91 28 28.8	0.250 348	39.9	11.6 Amfm Radio Licenses, L.L.C	-54.0*	-62.8*
251C3	WISM-FM Altoona	LIC	DCX	195.7 15.7	2.63 BLH20090121ADV	44 46 38.0 91 28 29.0	25.000 84	3.5	34.4 Aloha Station Trust, LLC	-17.6*	-32.6*
256D	W256AF Chippewa Falls Translator For WCFW, Chippewa Falls, WI-	LIC	_HN	21.8 201.8	17.75 BLFT19950918TJ	44 56 54.0 91 22 55.0	0.250 69	1.1	12.0 Bushland Radio Specialties	-1.7*	4.8
253C0	KTIS-FM Minneapolis	LIC	_C_	283.0 101.8	134.04 BMLED20030304AAJ	45 03 30.0 93 07 27.0	100.000 315	105.2	72.5 University Of Northwestern	7.8	30.4
255C0	WVCX Tomah	LIC	_C_	142.4 323.1	132.34 BMLED20020128ABE	43 51 10.0 90 27 36.0	100.000 300	104.1	71.6 Vcy America, Inc.	13.9	39.1
256C2	WKFX Rice Lake	LIC	NC_	330.8 150.4	73.14 BLH19991105AAO	45 22 23.0 91 55 22.0	44.000 159	6.0	52.7 Tkc, Inc.	47.2	19.4
254D	W274BW Medford	CP	_DC_	191.5 11.3	85.94 BPFT20160201AOJ	44 02 31.0 91 40 47.0	0.250 423	42.2	12.5 Edgewater Broadcasting, Inc	27.1	19.7
254D	W254BB Medford	LIC	_C_	66.6 247.3	96.09 BLFT20150826AAS	45 08 15.4 90 20 39.3	0.170 450	22.8	6.8 Wrvn, Inc.	58.0	38.9
255D	K263AL Red wing	CP	_C_	251.1 70.4	88.73 BPFT20160129AJL	44 32 14.0 92 31 20.0	0.250 363	22.5	14.9 Q Media Group, LLC	44.6	41.7
Terrain database is NGDC 30 SEC R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM Contour distances are on direct line to and from reference station. Reference zone= Co to 3rd adjacent. All separation margins (if shown) include rounding. Call signs with strikeout need not be protected. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) "="affixed to 'IN' or 'OUT' values = site inside restricted contour.											

**Figure 2. Contour Map**



**Figure 3. Image of Proposed Tower**



**Figure 4. Fill in and Overlap Map**

