

Minor Modification of Permit W246CK; BNPFT - 20130318ABJ Facility ID No. 146627

This exhibit is for minor modification of translator permit for W246CK Facility ID No. 146627, BNPFT - 20130318ABJ. It specifies a change in location, antenna elevation, and antenna model only.

Antenna Location

The proposed antenna is to be mounted on an existing tower identified by registration number 1041410 at 101 meters above ground, having a horizontal plane azimuth gain pattern as given in **Figure 0** below. 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 WDBO-FM; and **second** adjacent channel station WPCV.

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 WDBO-FM; In **Figure 2** a map showing the predicted 79.0 dBu signal contour of the protected facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 119.0 dBu ($79.0 + 40$) in a habitable/populated area. Utilizing the line of sight equation shown in **Figure 3** which considers the vertical elevation pattern of the proposed antenna, it has been determined that a 119.0 dBu signal developed by 250 watts, as proposed, emitted by the proposed antenna mounted 101 meters above ground, will not reach habitable areas or ground level. With examination of the image in **Figure 4** it can be determined that no habitable space extends above this height within the confines of this contour. Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

Concerning WPCV; In **Figure 2** a map showing the predicted 80.0 dBu signal contour of the protected facility at the proposed translator antenna location is given. As this signal is due the same 40 dB protection, and is of higher value than that of WDBO-FM, the demonstrated protection of the weaker WDBO-FM provides for the protection of WPCV.

Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

Fill-in and Minor Change Status

This proposal is to serve as a fill-in translator for station WRUM(FM), Facility ID 59976, Orlando, FL. The map of **Figure 5** demonstrates that the proposed 60 dBu contour is contained within that of the WRUM(FM) facility. It can also be seen that the proposed and permitted facilities have service 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 an **ERI 100A-2F-DA-HW**, a two (2) element, half-wave spaced antenna, mounted 101 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 Horizontal and Vertical plane. At 2 meters above the surface, at 156 meters from the base of the tower, this proposal will contribute worst case, 0.2 microwatts per square centimeter, or 0.02 percent of the allowable ANSI limit for controlled exposure, and 0.1 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 0. Antenna Pattern

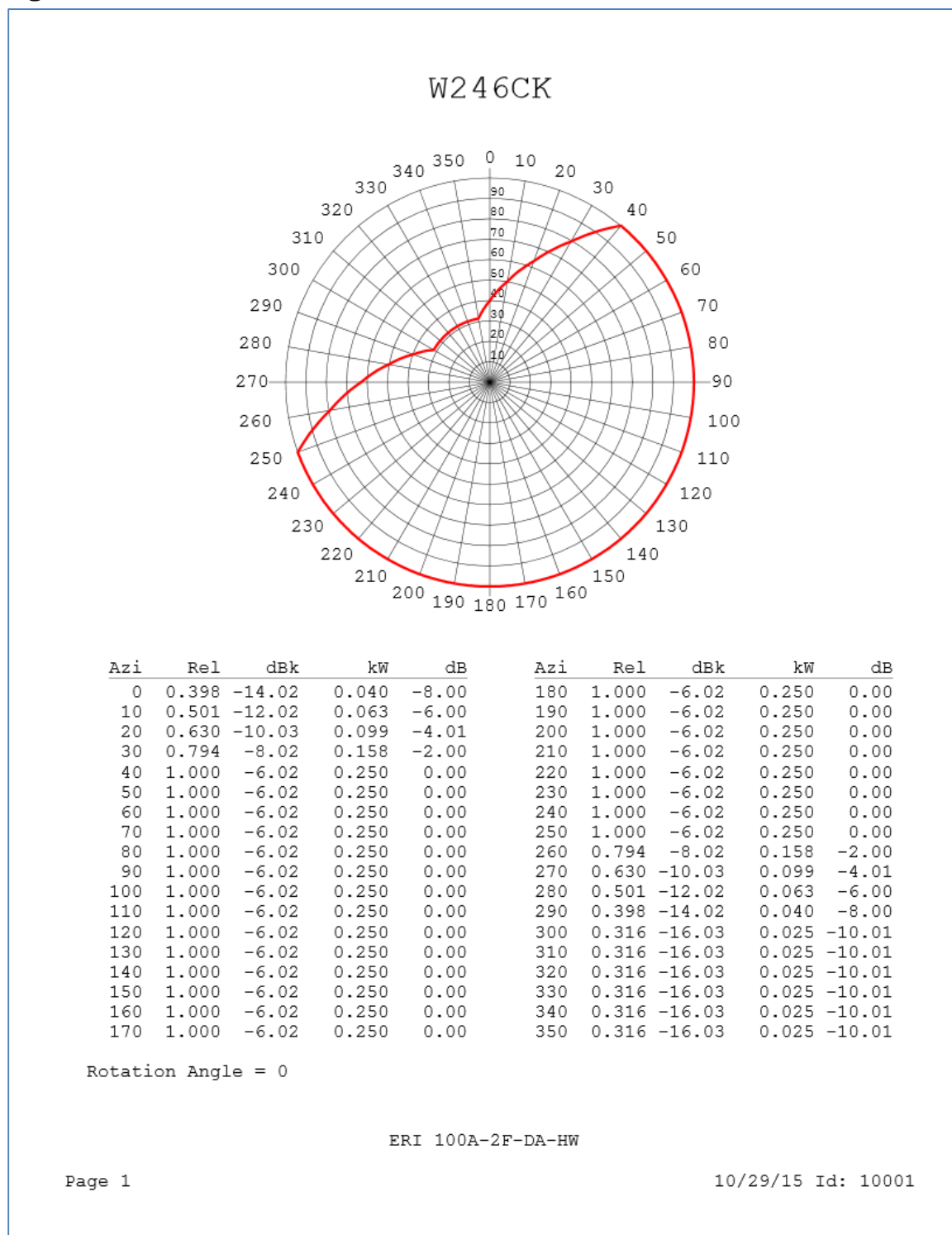


Figure 1. Overlap and Spacing Study

W246CK at ASR 1041410 DA from RM Clear Channel Broadcasting Licenses, Inc. CH# 246D - 97.1 MHz, Pwr= 0.25 kW DA, HAAT= 107.9 M, COR= 128 M Average Protected F(50-50)= 13.35 km Standard Directional											
REFERENCE 28 22 01.1 N. 81 23 12.8 W.										DISPLAY DATES DATA 10-28-15 SEARCH 10-28-15	
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*
246D	W246CK Kissimmee	CP	_C_	194.2 14.2	3.56 BNPFT20130318ABJ	28 20 09.0 81 23 45.0	0.038 60	20.0 79	6.0 Clear Channel Broadcasting	-30.1*	-49.0*
243C	WDBO-FM Orlando	LIC	NCY FL	55.3 235.5	39.48 BLH20011219AAC	28 34 07.0 81 03 16.0	100.000 454	12.1 463	83.3 Cox Radio, Inc.	14.1	-45.0*
248C0	WPCV Winter Haven	LIC	_CN FL	211.0 30.9	31.14 BLH19890908KA	28 07 35.0 81 33 03.0	100.000 310	10.5 340	74.0 Hall Communications, Inc.	7.2	-44.0*
246C3	WDSN Indian River Shores	LIC	ZCN FL	127.4 307.8	115.12 BLH19970501KE	27 44 06.0 80 27 27.0	23.000 106	112.4 109	39.1 Vero Beach Broadcasters, L	-10.9	29.6
One-Step Application from Channel 246A											
245D	W245CL Deltona	LIC	DC_	345.6 165.6	27.36 BLFT20150916ADC	28 36 21.6 81 27 24.6	0.250 173	23.4 173	15.5 Clear Channel Broadcasting	-3.5	1.3
246D	W246BT Clermont	LIC	DC_	314.8 134.7	29.36 BLFT20150806AAI	28 33 11.0 81 36 01.0	0.027 111	7.7 111	2.4 Clear Channel Broadcasting	14.3	2.4
246C2	WSUN-FM Holiday	LIC	NC_	261.7 81.0	137.07 BLH19980608KG	28 10 56.0 82 46 06.0	11.500 224	114.6 226	45.9 Cox Radio, Inc.	10.8	51.3
246L1	WTYX-LP Titusville	LIC	___	63.5 243.8	62.84 BLL20150724ABQ	28 37 03.0 80 48 40.0	0.100 29	32	30.7 Pathway Public Radio, Inc.	11.2	
246L1	WEDI-LP Deltona	CP	___	17.2 197.3	64.60 BNPL20131107AMJ	28 55 24.1 81 11 22.9	0.100 28	41	33.8 Ministerio International L	23.9	
246L1	NEW Eustis	CP	___	330.5 150.4	60.36 BNPL20131114BOW	28 50 24.6 81 41 33.2	0.100 30	56	32.9 On This Rock Communication	29.3	
299C	WMGF Mount Dora	LIC	_C_	6.2 186.2	61.59 BLH20081201AGU	28 55 10.1 81 19 07.4	100.000 484	0.0 494	0.0 Clear Channel Broadcasting	28.5R	33.1M
245L1	WRRQ-LP Cocoa	CP	___	91.0 271.3	62.80 BNPL20131029AGX	28 21 21.0 80 44 46.8	0.063 38	41	41.1 Living Free In Christ Chur	36.8	
245C	WINK-FM Fort Myers	LIC	_C_	192.1 11.9	177.53 BLH20060727AAL	26 48 01.0 81 45 48.0	100.000 457	124.6 465	83.9 Fort Myers Broadcasting Co	39.2	73.1

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 strikethrough 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

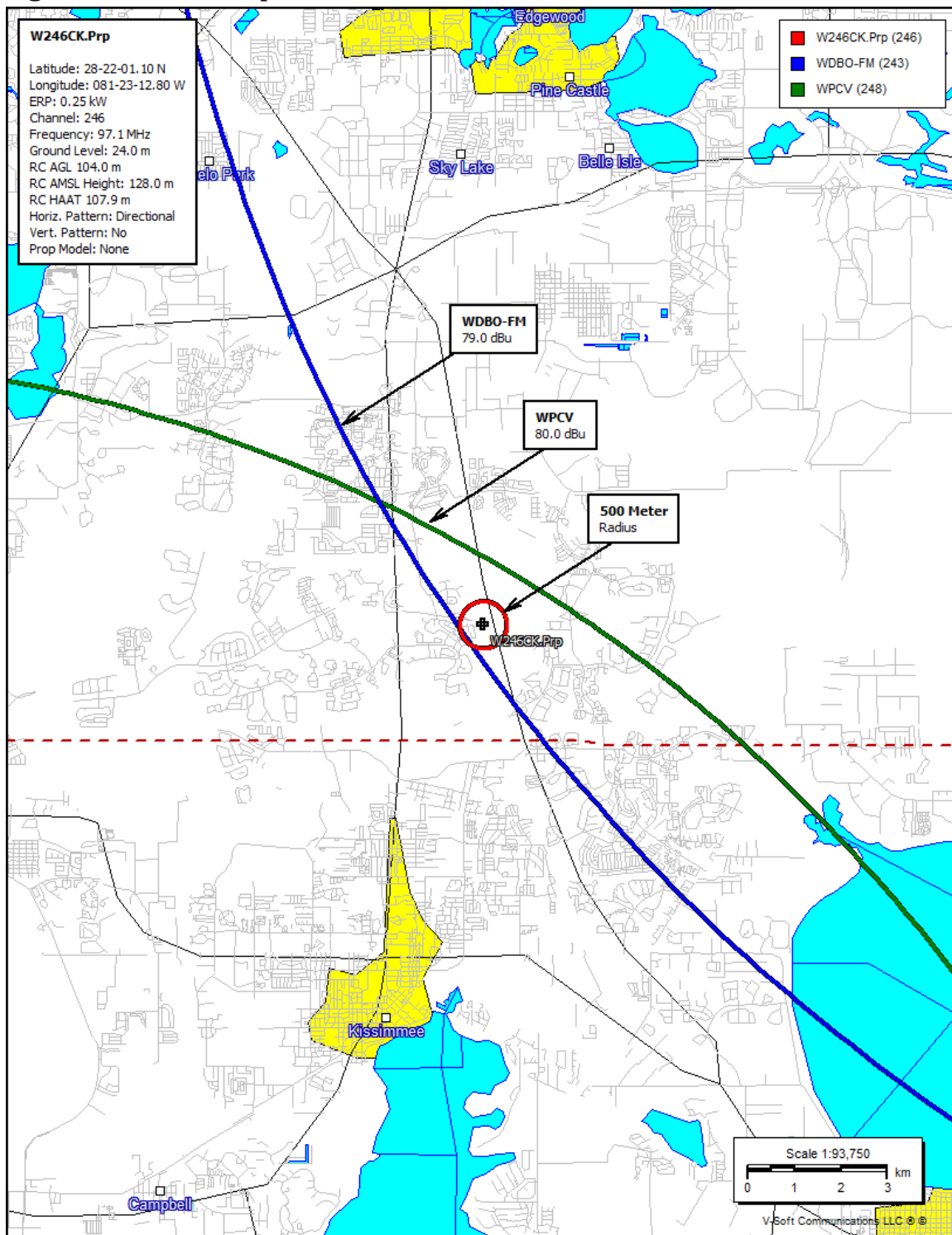


Figure 3. Signal Level at or Near Ground Level

Proposed Antenna: ERI A 100-2HW 2-bay half wave Proposed Power: 0.25 kW Antenna Height AGL: 101 meters Interference Contour: 119 dBu f(50:10) Artificial Rcv Antenna Height: 2 meters Distance (Free Space) Equation: $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)) * 1000}$ Field Strength (dBu) Equation: $= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$								
Fill in "yellow" cells								
Depression				Distance				
Angle	Antenna			from Ant.	Distance	Field Strength	Distance	Field Strength
Below	Relative	ERP	ERP	to Interf	from Ant. to	in dBu @	from Ant.	in dBu @
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	to Ground Level	Ground Level
0°	1.000	0.250	-6.02	124.44 m	infinite	---	infinite	---
-5°	0.984	0.242	-6.16	122.45 m	1135.90 m	99.65 dBu	1158.85 m	99.48 dBu
-10°	0.938	0.220	-6.58	116.73 m	570.12 m	105.22 dBu	581.64 m	105.05 dBu
-15°	0.865	0.187	-7.28	107.64 m	382.51 m	107.99 dBu	390.23 m	107.81 dBu
-20°	0.772	0.149	-8.27	96.07 m	289.46 m	109.42 dBu	295.30 m	109.25 dBu
-25°	0.665	0.111	-9.56	82.75 m	234.25 m	109.96 dBu	238.99 m	109.79 dBu
-30°	0.553	0.076	-11.17	68.82 m	198.00 m	109.82 dBu	202.00 m	109.65 dBu
-35°	0.442	0.049	-13.11	55.00 m	172.60 m	109.07 dBu	176.09 m	108.89 dBu
-40°	0.339	0.029	-15.42	42.19 m	154.02 m	107.75 dBu	157.13 m	107.58 dBu
-45°	0.248	0.015	-18.13	30.86 m	140.01 m	105.87 dBu	142.84 m	105.69 dBu
-50°	0.172	0.007	-21.31	21.40 m	129.24 m	103.38 dBu	131.85 m	103.21 dBu
-55°	0.112	0.003	-25.04	13.94 m	120.86 m	100.24 dBu	123.30 m	100.06 dBu
-60°	0.068	0.001	-29.37	8.46 m	114.32 m	96.39 dBu	116.62 m	96.21 dBu
-65°	0.037	0.000	-34.66	4.60 m	109.23 m	91.50 dBu	111.44 m	91.32 dBu
-70°	0.018	0.000	-40.92	2.24 m	105.35 m	85.55 dBu	107.48 m	85.38 dBu
-75°	0.007	0.000	-49.12	0.87 m	102.49 m	77.59 dBu	104.56 m	77.41 dBu
-80°	0.002	0.000	-60.00	0.25 m	100.53 m	66.87 dBu	102.56 m	66.70 dBu
-85°	0.001	0.000	-66.02	0.12 m	99.38 m	60.95 dBu	101.39 m	60.78 dBu
-90°	0.001	0.000	-66.02	0.12 m	99.00 m	60.99 dBu	101.00 m	60.81 dBu

Figure 4. Image of Proposed Support Tower



Figure 5. Fill-in and Minor Change Contour Map

