

Minor Change K243CA; BLFT-20150304AAI Facility ID No. 138341

This exhibit is for minor change of translator permit for K243CA Facility ID No. 138341, BLFT-20150304AAI. It specifies a minor change in channel only, from channel 243 to channel 245, and a power increase to 250 watts.

Antenna Location

The antenna is mounted on an existing tower identified by registration number 1043706 at 122 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 **second** adjacent channel station KHKI(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 KHKI(FM); In **Figure 2** a map showing the predicted 89 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 129 dBu ($89 + 40$) 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 129 dBu signal developed by 250 watts, as proposed, emitted by the proposed antenna mounted 122 meters above ground, will not reach habitable areas within 2 meters of the ground. With examination of the image in **Figure 4** it can be determined that no habitable space exists near the antenna.

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 continue service as a fill-in translator for station KDRB, Facility ID 51332, Des Moines, Iowa. The map of **Figure 5** demonstrates that the proposed 60 dBu contour is contained within the 60 dBu of the KDRB facility.

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 **FMVMP**, a one (1) element, vertical antenna, mounted 122 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 22 meters from the base of the tower, this proposal will contribute worst case, 0.83 microwatts per square centimeter, or 0.1 percent of the allowable ANSI limit for controlled exposure, and 0.5 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.

REFERENCE	CH#	245D	- 96.9 MHz, Pwr= 0.102 kW, HAAT= 0.0 M, COR= 375 M	DISPLAY DATES							
41 35 05.0 N.			Average Protected F(50-50)= 5.66 km	DATA 09-09-16							
93 38 29.0 W.			Omni-directional	SEARCH 09-09-16							
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY	STATE			<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
247C1 KHKI	LIC _CX	312.3	12.92	41 39 46.0	105.000	7.3	59.3	-4.0	-47.1*		
Des Moines	IA	132.2	BLH20060515AAB	93 45 23.0	143	425	Radio License Holding Cbc,				
245C1 KIAQ	LIC _CN	340.9	127.92	42 40 18.0	100.000	159.4	61.9	-42.6*	28.2		
Clarion	IA	160.6	BLH19870120KA	94 09 11.0	176	518	Alpha 3e Licensee Llc				
243D K243CA	LIC _V_	0.0	0.00	41 35 05.0	0.102	0.7	11.1	-11.8*	-11.8*		
Millman	IA	0.0	BLFT20150304AAI	93 38 29.0	161	375	Citicasters Licenses, Inc.				
298C1 KKDM	LIC _CN	77.2	30.10	41 38 38.0	100.000	0.0	0.0	21.5R	8.6M		
Des Moines	IA	257.5	BLH19980202KG	93 17 20.0	220	485	Clear Channel Broadcasting				
This permit is independent of permit BMPH-950921ID.											
242A KICL	LIC _CX	127.2	42.87	41 21 04.0	6.000	2.6	26.4	29.1	15.7		
Pleasantville	IA	307.5	BLH20110901ACQ	93 13 58.0	78	335	Iowa State University Of S				
244C3 KIIC	LIC _CX	129.7	99.48	41 00 38.0	10.000	54.4	36.0	34.0	47.5		
Albia	IA	310.3	BLH20120103ABP	92 43 47.0	141	404	Waveguide Communications I				
243C1 K50M	LIC _CN	260.9	100.88	41 26 07.0	100.000	7.1	58.5	83.4	41.7		
Audubon	IA	80.1	BLH19950817KB	94 50 00.0	161	556	Meredith Communications L.				
245C2 KZBK	LIC _CN	165.5	192.12	39 54 32.0	50.000	135.8	50.3	45.6	105.4		
Brookfield	MO	345.8	BLH19960117KC	93 04 34.0	150	401	Best Broadcasting, Inc.				
From Channel 249A per D88-435											
244L1 KCRM-LP	LIC _	49.4	79.71	42 02 56.0	0.100			61.0	58.8		
Marshalltown	IA	229.8	BLL20151029AHJ	92 54 35.0	30	322	Marshalltown Association F				
242D K242BX	LIC _C_	49.4	79.52	42 02 52.0	0.250	1.1	7.1	67.7	71.7		
Marshalltown	IA	229.8	BLFT20090601AIE	92 54 41.0	29	317	University Of Northwestern				
246A KMYQ	LIC _CX	96.0	128.70	41 27 13.0	3.900	25.0	16.9	92.0	94.6		
North English	IA	277.0	BLH20120123ABO	92 06 34.0	40	280	Justin A Mcluckie				
245C1 KZKX	LIC _CX	260.2	272.07	41 07 23.6	100.000	162.1	64.0	99.6	172.7		
Seward	NE	78.0	BLH20160408AAU	96 50 03.7	183	614	Alpha 3e Licensee Llc				

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

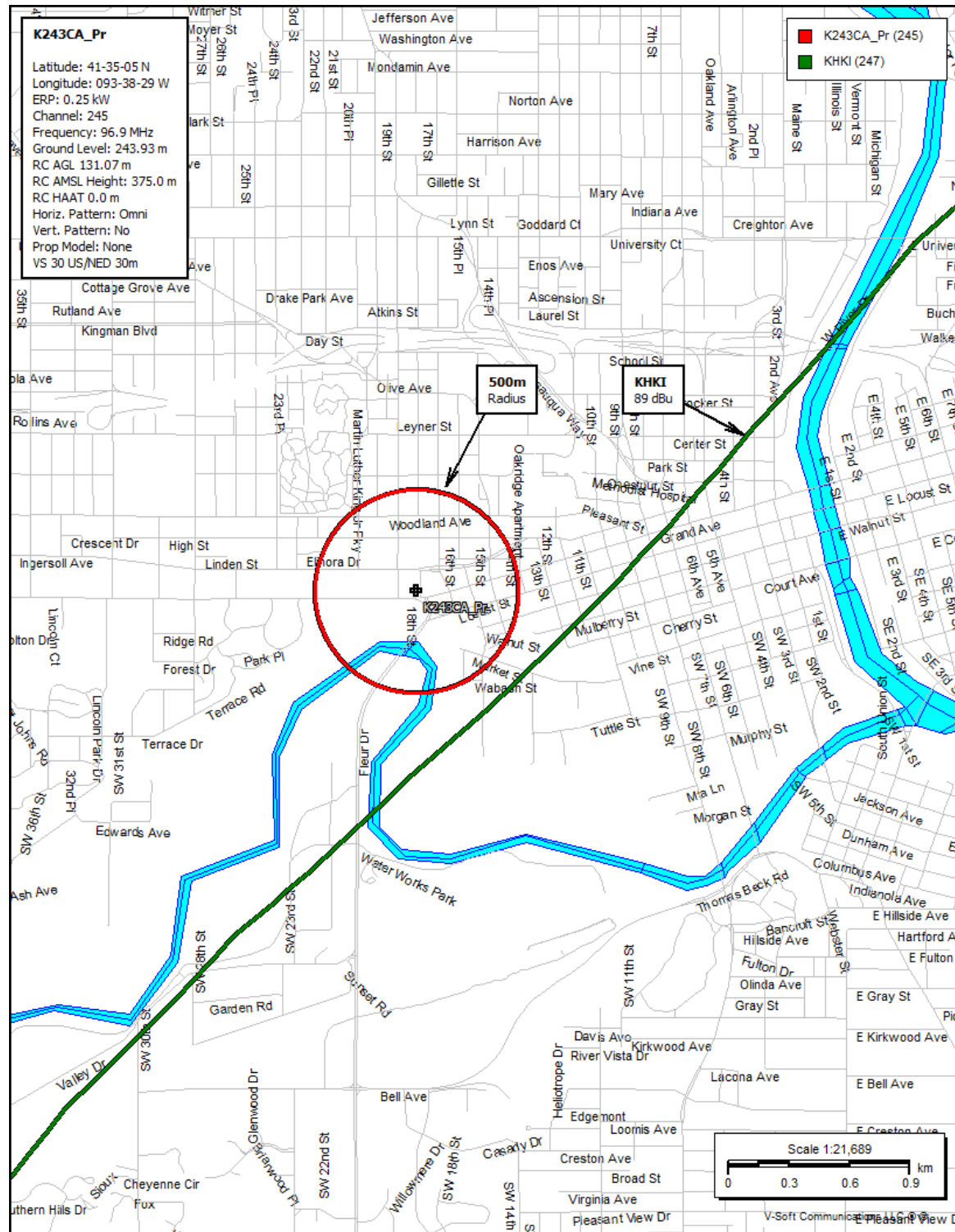


Figure 3. Signal Level at or Near Ground Level

Proposed Antenna: Scala FM/MMP-2 Proposed Power: 0.25 kW Antenna Height AGL: 122 meters Interference Contour: 129 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 $= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$								
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	39.35 m	infinite	---	infinite	---
-5°	0.967	0.234	-6.31	38.05 m	1376.85 m	97.83 dBu	1399.79 m	97.69 dBu
-10°	0.873	0.191	-7.20	34.35 m	691.05 m	102.93 dBu	702.57 m	102.79 dBu
-15°	0.726	0.132	-8.80	28.57 m	463.64 m	104.79 dBu	471.37 m	104.65 dBu
-20°	0.545	0.074	-11.29	21.45 m	350.86 m	104.72 dBu	356.70 m	104.58 dBu
-25°	0.350	0.031	-15.14	13.77 m	283.94 m	102.72 dBu	288.68 m	102.57 dBu
-30°	0.163	0.007	-21.78	6.41 m	240.00 m	97.54 dBu	244.00 m	97.40 dBu
-35°	0.010	0.000	-46.02	0.39 m	209.21 m	74.49 dBu	212.70 m	74.34 dBu
-40°	0.119	0.004	-24.51	4.68 m	186.69 m	96.99 dBu	189.80 m	96.84 dBu
-45°	0.198	0.010	-20.09	7.79 m	169.71 m	102.24 dBu	172.53 m	102.10 dBu
-50°	0.235	0.014	-18.60	9.25 m	156.65 m	104.42 dBu	159.26 m	104.28 dBu
-55°	0.240	0.014	-18.42	9.44 m	146.49 m	105.19 dBu	148.93 m	105.04 dBu
-60°	0.222	0.012	-19.09	8.74 m	138.56 m	104.99 dBu	140.87 m	104.85 dBu
-65°	0.189	0.009	-20.49	7.44 m	132.41 m	103.99 dBu	134.61 m	103.85 dBu
-70°	0.148	0.005	-22.62	5.82 m	127.70 m	102.18 dBu	129.83 m	102.04 dBu
-75°	0.105	0.003	-25.64	4.11 m	124.23 m	99.40 dBu	126.30 m	99.25 dBu
-80°	0.060	0.001	-30.46	2.36 m	121.85 m	94.75 dBu	123.88 m	94.60 dBu
-85°	0.018	0.000	-40.92	0.71 m	120.46 m	84.39 dBu	122.47 m	84.24 dBu
-90°	0.023	0.000	-38.79	0.91 m	120.00 m	86.55 dBu	122.00 m	86.41 dBu

Figure 4. Image of Proposed Support Tower



Figure 5. Fill-in and Minor Change Contour Map

