

Technical Report K246CH Minor Modification

This technical report is submitted for a minor modification to K246CH, FCC file no. BLFT-20160404ACM. A move to channel 256 and increase in ERP are submitted, following FCC 17-14, MB Docket 13-249, footnote 22. The translator will continue to serve as a fill-in facility for KIKO(AM) 1340 kHz at Apache Junction, AZ, FCC facility I.D. 72477.

K246CH Modification Analysis:

An overlap study (exhibit E-1) shows the K246CH modification at channel 256 is within the KMVP-FM 254C second-adjacent protected contour. The KFXV-LP 256L1 license and applications have been dismissed. A tabulation of the 117.9 +40 dBu F(50-10) contour (exhibit E-2) shows the interfering contour will not encompass any population, major roads or buildings (exhibit E-3). The 60 dBu contour overlaps the current 60 dBu contour and is contained within the primary KIKO(AM) 2.0 mV/m daytime contour (exhibit E-4).

Antenna System:

The K246CH modification is located on the existing 46 meter tower at coordinates:

33 29 33N 111 38 23W NAD 27.

A TOWAIR determination (exhibit E-5) shows the tower does not require registration. A Scala CL-FM single bay, horizontally-polarized, directional antenna oriented at 208 degrees azimuth (exhibit E-6) is mounted at a COR AGL of 10 meters, 772 meters AMSL and will operate at 0.250 kW ERP.

RF Exposure Calculation:

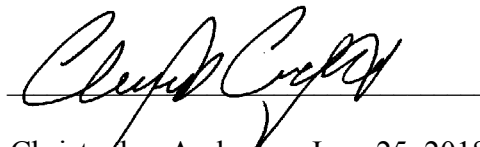
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

Using a worst case vertical (F) factor of 1.0, the RF is calculated to be 130.5 $\mu\text{W}/\text{cm}^2$ to the ground, which is well below the 1000 $\mu\text{W}/\text{cm}^2$ maximum permissible for controlled, occupational exposure.

Conclusion:

It is concluded the K246CH modification complies with all Commission rules and policies.



Christopher Anderson June 25, 2018
andersce@bham.rr.com
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E-1 K246CH Mod. 256D Overlap Study

REFERENCE 33 29 33.0 N. 111 38 23.0 W.		CH# 256D - 99.1 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 772 M Average Protected F(50-50)= 7.09 km Standard Directional								DISPLAY DATES DATA 06-25-18 SEARCH 06-25-18	
CH CITY	CALL	TYPE STATE	ANT AZ	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
256L1 Mesa	KFXV-LP	APP	---	162.5 342.5	5.47 BPL20180117ACV	33 26 44.0 111 37 19.0	0.006 115	628	San Tan Educational Media	-21.8*	-69.5*(1)
256L1 Mesa	KFXV-LP	LIC	---	152.5 332.5	6.64 BLL20170710AAT	33 26 22.1 111 36 23.8	0.100 7	545	San Tan Educational Media	-20.3*	-69.0*
256L1 Mesa	KFXV-LP	APP	---	152.6 332.6	6.66 BPL20170911ADI	33 26 21.5 111 36 24.1	0.100 1	538	San Tan Educational Media	-20.3*	-68.8*
254C Phoenix	KMVP-FM	LIC	_C_	245.8 65.6	43.13 BMLH20040707ABN	33 19 58.0 112 03 48.0	100.000 545	12.3 911	84.8 Bonneville International C	10.6	-42.3*(2)
256D Globe	DK256DB	APP	DV_	159.5 339.6	29.10 BPFT20170710ABF	33 14 50.0 111 31 49.0	0.250	40.2 618	3.3 Rocket Radio Corporation	-22.1*	-39.1*
257C2 Payson	KEMP	CP	ZCX	19.8 200.0	81.82 BPH20100430ACE	34 11 04.0 111 20 16.0	50.000 140	109.3 1468	73.8 Kemp Communications, Inc.	-30.5*	2.4
257C3 Payson	KEMP	LIC	_CX	19.8 200.0	81.82 BLH20070813ABX	34 11 04.0 111 20 16.0	17.000 123	91.6 1457	61.8 Kemp Communications, Inc.	-12.8*	14.2
256D Globe	DK256DB	LIX	DV_	128.3 308.6	56.98 BLFT20170614AAU	33 10 26.0 111 09 33.0	0.250	56.2 1063	3.5 Rocket Radio Corporation	-5.7	13.0
256D Globe	DK256DB	LIC	DV_	106.5 287.0	78.57 BLFT20170424AAQ	33 17 20.0 110 49 45.0	0.099	74.0 2315	11.1 Rocket Radio Corporation	0.8	48.1
257L1 Gold Canyon	KRWV-LP	LIC	---	131.0 311.1	25.47 BLL20150727AAP	33 20 31.0 111 25 57.9	0.100	573	Gold Canyon Public Radio I	2.7	8.1
257D Phoenix	K257CD	LIC	DC_	285.4 105.2	42.93 BLFT20180213AAA	33 35 40.0 112 05 12.0	0.250	29.7 671	15.3 Michael Piazza, LIc	3.9	10.7
202C1 Phoenix	KCCF-FM	LIC	_CN	285.6 105.3	43.50 BLED19920121KC	33 35 47.0 112 05 29.0	22.500 304	8.0 704	5.6 Cesar Chavez Foundation	21.5R	22.0M
202C1 Phoenix	KPHF	LIC	_C_	285.5 105.3	43.55 BLED19990716KB	33 35 47.0 112 05 31.0	22.500 297	8.0 704	5.6 Family Stations, Inc.	21.5R	22.1M
258D Casa Grande	K271CR	APP	DV_	183.4 3.3	54.50 BPFT20180514AAE	33 00 11.0 111 40 26.0	0.250	0.4 843	11.1 Mountain Community Transla	32.5	34.8

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
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.
« = Station meets FCC minimum distance spacing for its class.
Reference station has protected zone issue: Mexico

(1) The KFXV-LP 256L1 license and applications have been dismissed.

(2) The +40 117.9 F(50-10) dBu contour within the KMVP-FM 254C second-adjacent protected contour (exhibit E-2) does not encompass any population, roads or buildings (exhibit E-3).

E-2 K246CH Mod. 256D +40 dBu Tabulation Within KMVP-FM 254C

K246CH Phoenix, AZ, Showing Protection to KMVP-FM
Geographic Coordinates: N.33 29 33.00 W.111 13 23.00
74.1204(d) Study - Using FCC 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.25
Translator or LPFM Antenna Height AG = 10 Meters
K246CH Antenna Model = SCALA CLFMH-1

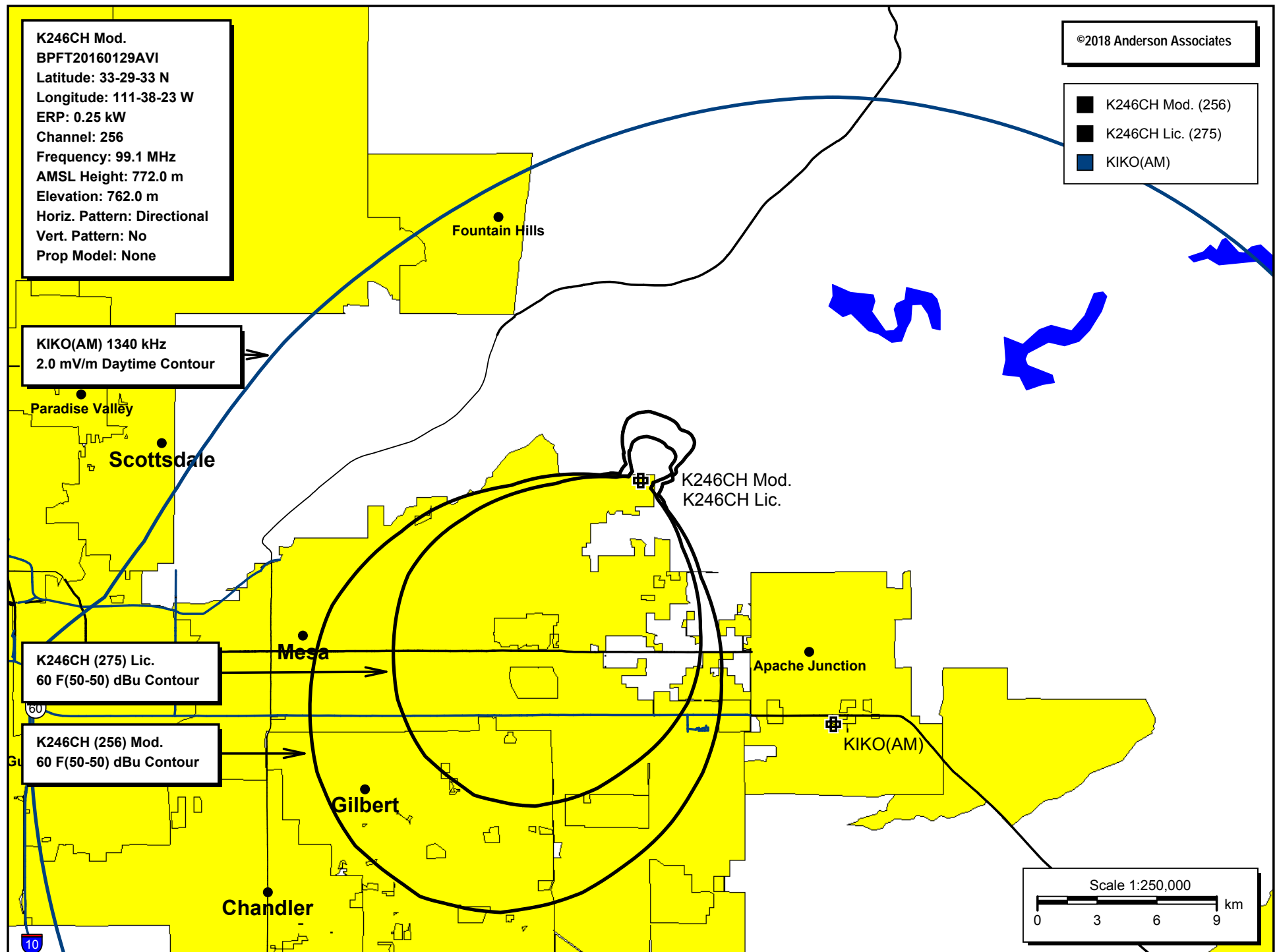
Protected Station's Contour = 77.89632 dBu
Translator's or LPFM's full Interference contour 117.89632

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 0.038
Translator/LPFM ERP on the horizon at Review Azimuth = 0.0 kW
Distance between stations = 43.1 km
Protected Station= KMVP-FM, 100 kW, 911 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	0.04	0.0095	027.5452	027.5452	010.000
05.00	0.98	0.04	0.0091	026.9943	026.8916	007.647
10.00	0.95	0.04	0.0086	026.1679	025.7704	005.456
15.00	0.895	0.04	0.0076	024.6529	023.8129	003.619
20.00	0.82	0.04	0.0064	022.5871	021.2249	002.275
25.00	0.735	0.04	0.0051	020.2457	018.3489	001.444
30.00	0.645	0.04	0.0040	017.7666	015.3864	001.117
35.00	0.562	0.04	0.0030	015.4804	012.6808	001.121
40.00	0.47	0.04	0.0021	012.9462	009.9174	001.678
45.00	0.36	0.04	0.0012	009.9163	007.0119	002.988
50.00	0.25	0.04	0.0006	006.8863	004.4264	004.725
55.00	0.155	0.04	0.0002	004.2695	002.4489	006.503
60.00	0.085	0.04	0.0001	002.3413	001.1707	007.972
65.00	0.045	0.04	0.0000	001.2395	000.5238	008.877
70.00	0.02	0.04	0.0000	000.5509	000.1884	009.482
75.00	0.01	0.04	0.0000	000.2755	000.0713	009.734
80.00	0.01	0.04	0.0000	000.2755	000.0478	009.729
85.00	0.01	0.04	0.0000	000.2755	000.0240	009.726
90.00	0.01	0.04	0.0000	000.2755	000.0000	009.725



E-4 K246CH (275) Mod. 60 dBu Contour Plot



TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	33-29-33.2 north
Longitude	111-38-25.5 west

Measurements (Meters)

Overall Structure Height (AGL)	46
Support Structure Height (AGL)	0
Site Elevation (AMSL)	762

Structure Type

GTOWER - Guyed Structure Used for Communication Purposes

E-6 K246CH Directional Antenna Pattern

Azi	Field	dBk	kW
000	0.038	-34.425	0.000
010	0.040	-33.979	0.000
020	0.040	-33.979	0.000
030	0.040	-33.979	0.000
040	0.040	-33.979	0.000
050	0.040	-33.979	0.000
060	0.037	-34.657	0.000
070	0.032	-35.918	0.000
080	0.023	-38.786	0.000
090	0.014	-43.098	0.000
100	0.010	-46.021	0.000
110	0.010	-46.021	0.000
120	0.010	-46.021	0.000
130	0.012	-44.437	0.000
140	0.033	-35.650	0.000
150	0.118	-24.583	0.003
160	0.294	-16.654	0.022
170	0.505	-11.955	0.064
180	0.680	-9.370	0.116
190	0.846	-7.473	0.179
200	0.960	-6.375	0.230
210	0.990	-6.108	0.245
220	0.924	-6.707	0.213
230	0.785	-8.123	0.154
240	0.610	-10.314	0.093
250	0.426	-13.432	0.045
260	0.217	-19.291	0.012
270	0.072	-28.874	0.001
280	0.018	-40.915	0.000
290	0.010	-46.021	0.000
300	0.010	-46.021	0.000
310	0.010	-46.021	0.000
320	0.011	-45.193	0.000
330	0.017	-41.412	0.000
340	0.027	-37.393	0.000
350	0.035	-35.139	0.000

