

Technical Report K246CH.AP 256D Minor Modification

This technical report is submitted for an amendment to the minor modification application to K246CH.AP 256D, FCC file no. BPFT-20180625ABP. A conversion of the site coordinates to NAD83 is submitted with the move to channel 256 and increase in ERP, following FCC 17-14, MB Docket 13-249, footnote 22. The translator will 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-LPFM 256L1 license and applications have been dismissed. A tabulation of the 117.37 +40 dBu F(50-10) contour (exhibit E-2) shows the interfering contour will not encompass any population, major roads or occupied 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 256D modification is located on the existing 46 meter tower at coordinates:

33 29 33.5N 111 38 26.1W NAD 83.

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

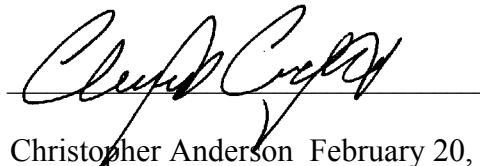
and will operate at 0.250 kW ERP.

RF Exposure Calculation:

The RF contribution was calculated using FM Model (exhibit E-7). The resulting RF is calculated to be $36.2 \mu\text{W}/\text{cm}^2$ at a distance of 4.6 meters from the base of the tower, which is well below the $1000 \mu\text{W}/\text{cm}^2$ maximum permissible for controlled, occupational exposure.

Conclusion:

It is concluded the K246CH.AP 256D modification complies with all Commission rules and policies.

A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson February 20, 2020
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E-1 K246CH.AP Mod. 266D Overlap Study

REFERENCE 33 29 33.50 N. 111 38 26.10 W.		CH# 256D - 99.1 MHz, Pwr= 0.25 kW DA, HAAT= 276.0 M, COR= 772 M Average Protected F(50-50)= 21.67 km Standard Directional								DISPLAY DATES DATA 02-20-20 SEARCH 02-20-20	
CH CITY	CALL	TYPE STATE	ANT AZ	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
256L1 Mesa	KFXV-LP	LIC	___	190.5 10.5	0.02 BLL20150527ACT	33 29 32.60 111 38 26.30	0.002 258	762	San Tan	-43.1*	-72.2*(1)
256L1 Mesa	KFXV-LP	APP	___	162.3 342.3	5.49 BPL20180117ACV	33 26 44.10 111 37 21.40	0.005 137	628	San Tan	-22.9*	-70.4*
256L1 Mesa	KFXV-LP	APP	___	152.5 332.5	6.67 BPL20170911ADI	33 26 21.60 111 36 26.50	0.100 1	538	San Tan	-20.5*	-69.9*
254C Phoenix	KMVP-FM	LIC	___	245.8 65.6	43.12 BMLH20040707ABN	33 19 58.20 112 03 50.50	100.000 545	12.1 911	83.3 Bonneville	10.6	-40.7*(2)
257C2 Payson	KEMP	CP	Z___	19.9 200.0	81.82 BPH20180731AB0	34 11 04.10 111 20 18.40	50.000 140	106.9 1468	72.0 Kemp Communications, Inc.	-28.0*	3.8
256D Phoenix	K246CH	APP	D___	0.0 304.4	0.00 BMPFT20180706ABB	33 29 33.10 111 38 25.40	0.250	771	---Reference---	Rocket Radio Corporation	
256D Phoenix	K246CH	APP	D___	0.0 304.4	0.00 BPFT20180625ABP	33 29 33.10 111 38 25.40	0.250	772	---Reference---	Rocket Radio Corporation	
257C3 Payson	KEMP	LIC	___	19.9 200.0	81.82 BLH20070813ABX	34 11 04.10 111 20 18.40	17.000 123	89.4 1457	60.3 Kemp Communications, Inc.	-10.5*	15.1
257L1 Gold Canyon	KRWV-LP	LIC	___	131.0 311.1	25.49 BMLL20180706ABC	33 20 31.10 111 26 00.30	0.100 -52	573	Gold Canyon	2.0	7.1
257L1 Gold Canyon	KRWV-LP	CP	___	130.9 311.0	25.54 0000101893	33 20 31.30 111 25 57.80	0.075 -38	573	Gold Canyon	3.1	8.8
257D Phoenix	K257CD	LIC	D___	285.4 105.2	42.92 BLFT20180213AAA	33 35 40.10 112 05 14.50	0.250	29.4 671	15.9 LPFM Broadcasting, LLC	4.1	9.3
202C1 Phoenix	KVCP	LIC	___	285.5 105.3	43.48 BLED19920121KC	33 35 47.10 112 05 31.50	22.500 304	81.5 704	27.5 Vcy AMerica, Inc.	21.5R	22.0M
202C1 Phoenix	KPHF	LIC	___	285.5 105.3	43.53 BLED19990716KB	33 35 47.10 112 05 33.50	22.500 297	81.5 704	27.5 Family Stations, Inc.	21.5R	22.0M
256C1 Virden	KFMM	RSV-A	___	106.6 287.9	225.74	32 53 22.24 109 19 25.26	100.000 299	174.3 1571	72.3 Cochise Broadcasting LLC	44.6	147.3

Terrain database is GLOBE 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 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, major roads or buildings (exhibit E-3).

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

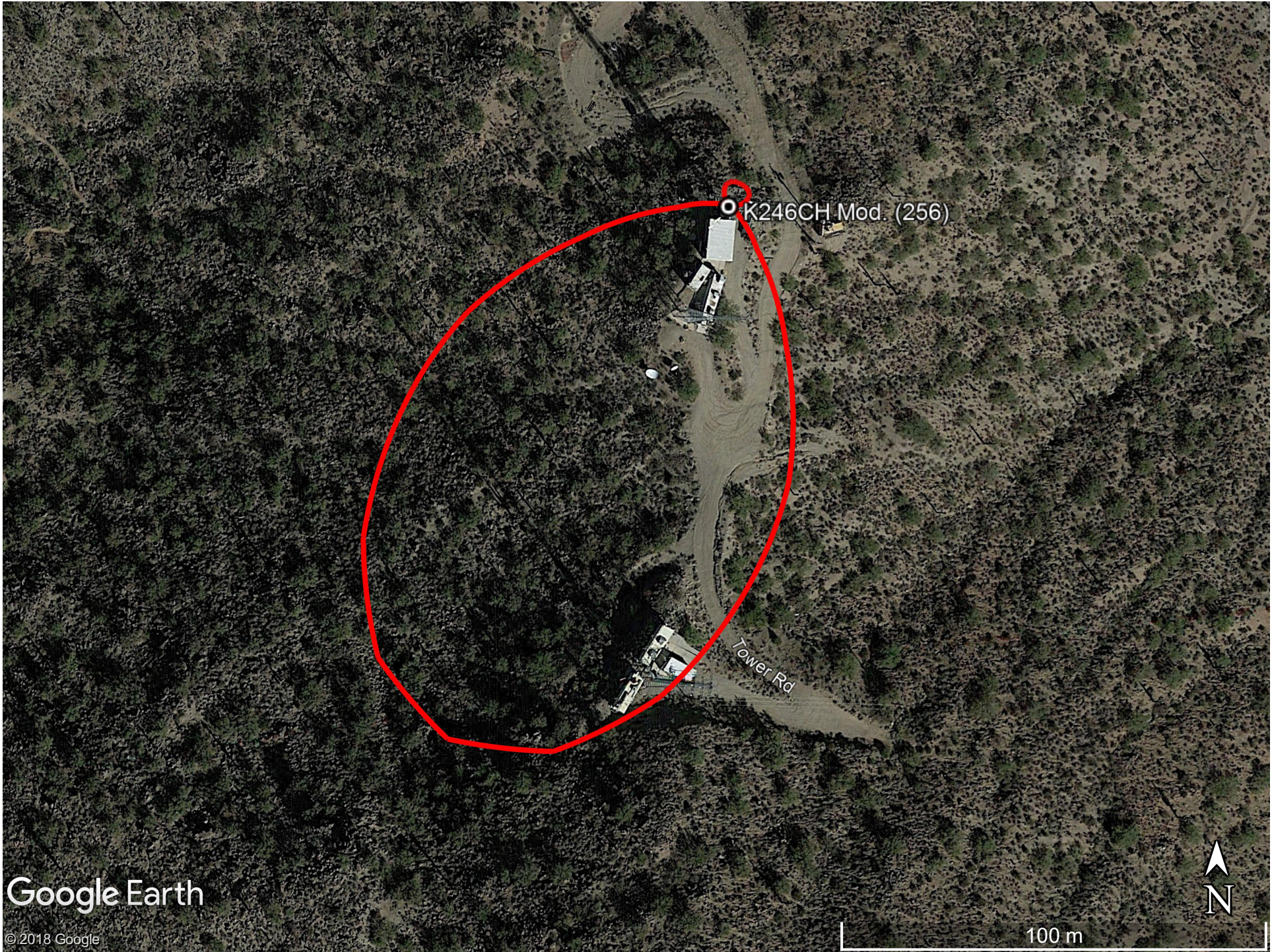
K246CH.A Phoenix, AZ, Showing Protection to KMVP-FM , Channel: 254
Geographic Coordinates: N. 33 29 33.50 W. 111 38 26.10
74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 256
Translator or LPFM Antenna Height AG = 10 meters
K246CH.A Antenna Model = CL-FM_Hpol

Protected Station's Contour = 77.36879 dBu
Translator's or LPFM's full Interference contour 117.36879

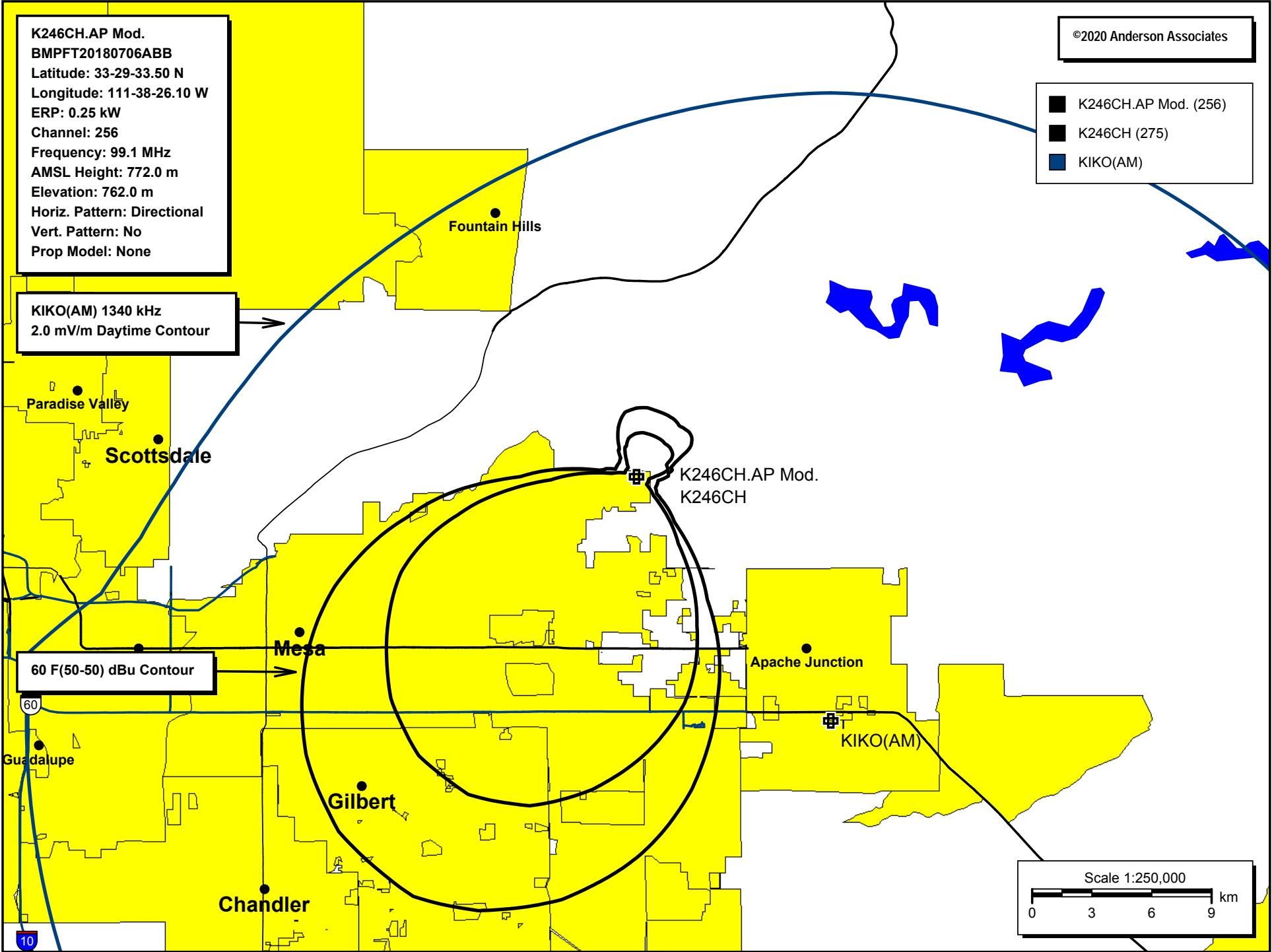
Review Azimuth = 208 Degrees True
Horizontal Relative Field at Review Azimuth = 1.000
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW
Distance between stations = 43.1 km
Protected Station= KMVP-FM, 100 kW, 911 M meters COR AMSL

Depression Angle From Degree(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) (1)
00.00	1.0	1.0	0.2500	150.1518	150.1518	010.000
05.00	0.994	1.0	0.2468	149.1758	148.6081	-003.002
10.00	0.98	1.0	0.2401	147.1488	144.9132	-015.552
15.00	0.953	1.0	0.2268	143.0196	138.1463	-027.016
20.00	0.917	1.0	0.2100	137.6141	129.3150	-037.067
25.00	0.873	1.0	0.1903	131.0074	118.7331	-045.366
30.00	0.818	1.0	0.1671	122.7491	106.3038	-051.375
35.00	0.756	1.0	0.1427	113.4397	092.9243	-055.066
40.00	0.69	1.0	0.1190	103.6047	079.3658	-056.596
45.00	0.618	1.0	0.0953	092.7187	065.5620	-055.562
50.00	0.544	1.0	0.0738	081.6075	052.4563	-052.515
55.00	0.468	1.0	0.0546	070.1960	040.2627	-047.501
60.00	0.39	1.0	0.0380	058.5592	029.2796	-040.714
65.00	0.3	1.0	0.0225	045.0455	019.0371	-030.825
70.00	0.19	1.0	0.0090	028.5288	009.7574	-016.808
75.00	0.11	1.0	0.0030	016.5167	004.2748	-005.954
80.00	0.05	1.0	0.0006	007.5076	001.3037	002.606
85.00	0.03	1.0	0.0002	004.5046	000.3926	005.513
90.00	0.03	1.0	0.0002	004.5046	000.0000	005.495

(1) The +40 117.91 F(50-10) dBu contour does not encompass any population, roads or occupied buildings, as shown in the aerial photo in exhibit E-3.



E-4 K246CH.AP Mod. 256D 60 F(50-50) 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	33-29-33.5 north
Longitude	111-38-26.1 west

Measurements (Meters)

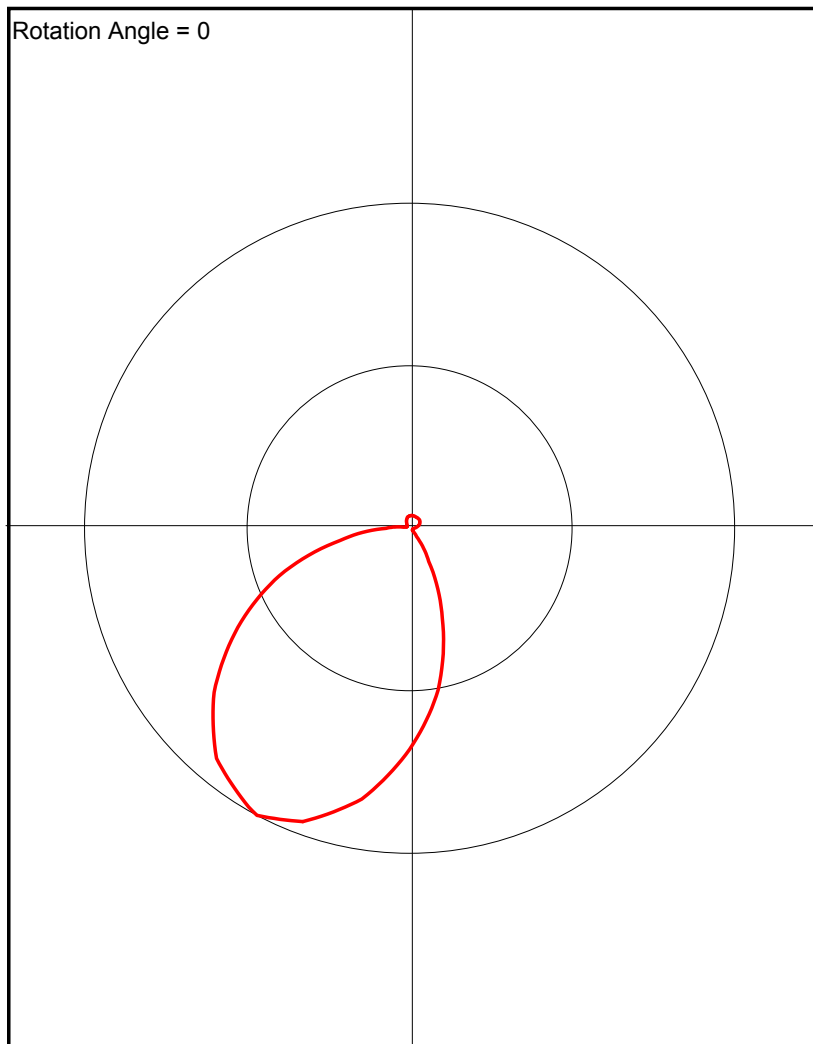
Overall Structure Height (AGL)	46
Support Structure Height (AGL)	0
Site Elevation (AMSL)	762

Structure Type

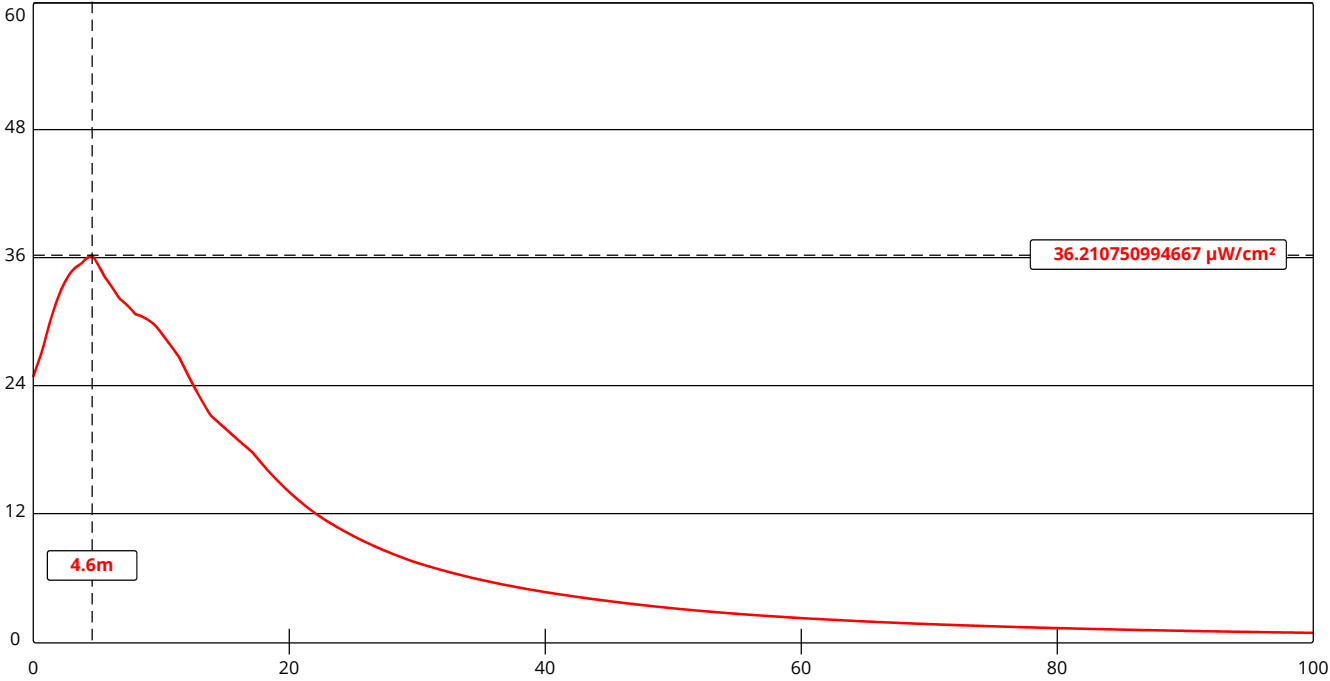
GTOWER - Guyed Structure Used for Communication Purposes

E-6 Directional Antenna Pattern

Azimuth (deg)	Relative Field
0.0	0.038
10.0	0.04
20.0	0.04
30.0	0.04
40.0	0.04
50.0	0.04
60.0	0.037
70.0	0.032
80.0	0.023
90.0	0.014
100.0	0.01
110.0	0.01
120.0	0.01
130.0	0.012
140.0	0.033
150.0	0.118
160.0	0.294
170.0	0.505
180.0	0.68
190.0	0.846
200.0	0.96
210.0	0.99
220.0	0.924
230.0	0.785
240.0	0.61
250.0	0.426
260.0	0.217
270.0	0.072
280.0	0.018
290.0	0.01
300.0	0.01
310.0	0.01
320.0	0.011
330.0	0.017
340.0	0.027
350.0	0.035



FM Model



Channel Selection	Channel 256 (99.1 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	10	Distance (m)	100
ERP-H (W)	250	ERP-V (W)	0
Num of Elements	1	Element Spacing (λ)	1
Num of Points	500		