

Channel 6 TV Protection Study

The Channel 6 TV station that is within the required study distance of 187 km for FM Channel 214 is as follows:

KEMV LI 06- 2E Dom 100.000 kW 424 M HAAT V H
Mountain View AR 753M COR AMSL
Lat= 35 48 47, Lng= 92 17 24
Arkansas Educational Telev BLET19800903KE
Fac ID# 2777, Cutoff Date= 810227
Dist.=144.8936 km, Azi=59.8°, Rev Azi=240.6°

Direct line HAAT Grade B, 47 dBu= 113.1 km & Grade A= 61.84 km

Distance from reference to Grade B = 31.79 km

Cutoff Dist from Full Service= 187

Maximum Co-located power= 46.8 kW

KEMV Signal Contour at Reference location = 37.9 dBu

CH. 214, U/D ratio = 24.8 dB, Maximum FM signal = 71.8 dBu , add 6 dB if within angle.

TV/FM D to U values

47.0	71.8	55.0	69.2	63.0	70.6	71.0	76.0	79.0	82.0	87.0	88.4
48.0	71.2	56.0	69.2	64.0	71.0	72.0	76.6	80.0	82.8	88.0	89.0
49.0	70.6	57.0	69.2	65.0	71.4	73.0	77.3	81.0	83.7	89.0	89.5
50.0	70.0	58.0	69.2	66.0	72.2	74.0	78.0	82.0	84.5	90.0	90.3
51.0	69.7	59.0	69.3	67.0	73.0	75.0	78.8	83.0	85.4	91.0	90.3
52.0	69.5	60.0	69.6	68.0	73.8	76.0	79.6	84.0	86.2	92.0	90.3
53.0	69.2	61.0	69.9	69.0	74.5	77.0	80.4	85.0	87.1	93.0	90.3
54.0	69.2	62.0	70.2	70.0	75.2	78.0	81.2	86.0	87.9	94.0	90.3

This amendment specifies a slight change in the geographical coordinates with no change in the ERP, directional pattern, or COR AMSL, and therefore there is no significant change in the proposed FM's relationship to KEMV CH 6 TV. The proposed FM will operate on CH 214 with a maximum ERP of 26.0 kW (DA), vertical-polarization only, at a COR AMSL of 890 meters. Per Section 73.525, the maximum permissible vertically polarized ERP of 26.0 kW (DA) was calculated by multiplying the maximum horizontally polarized ERP of .650 kW (DA) by 40, as the FM predicted interference area lies entirely outside the limits of a city of 50,000 persons or more. The proposed FM is in compliance with all requirements of Section 73.525 as the proposed FM's 71.8 dBu interference contour does not overlap KEMV's 47.0 dBu protected contour.

Pages 2 & 3 contain a tabulation and map of KEMV's 47.0 dBu protected contour and the proposed FM's 71.8 dBu interference contour.

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Tabulation of KEMV CH 6 TV 47.0 dBu protected contour & NEW FM 71.8 dBu interference contour

KEMV TV BLET19800903KE
 Channel 06-2E
 100 kW ERP
 753 M COR AMSL
 35 48 47
 92 17 24

NEW FM 971202 BPED19971202MA
 Channel 214 C0
 0.650 kW ERP (Maximum permissable H)
 890 M COR AMSL
 35 09 56
 93 40 36

Protected 47 dBu

Interfering 71.8 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
180.0	100.0000	0408.8	112.2	107.3	000.1751	0641.2	132.9	27.9
185.0	100.0000	0462.4	117.0	110.7	000.1751	0667.4	124.7	30.5
190.0	100.0000	0436.2	114.6	110.8	000.1751	0667.4	114.3	33.4
195.0	100.0000	0431.4	114.2	111.4	000.1751	0667.4	104.4	36.1
200.0	100.0000	0415.4	112.7	111.0	000.1751	0667.4	094.4	39.0
205.0	100.0000	0395.1	110.9	109.7	000.1751	0661.1	084.7	41.9
210.0	100.0000	0402.7	111.6	109.2	000.1751	0655.0	074.9	44.9
215.0	100.0000	0369.2	108.7	104.9	000.1751	0621.6	066.4	47.1
220.0	100.0000	0403.9	111.7	104.0	000.1751	0608.2	056.3	50.4
225.0	100.0000	0450.7	115.9	102.8	000.1751	0591.3	045.6	54.1
230.0	100.0000	0433.0	114.3	092.3	000.1361	0420.7	038.8	52.3
235.0	100.0000	0425.1	113.6	078.5	000.0875	0377.4	033.9	51.5
240.0	100.0000	0418.0	113.0	061.4	000.1194	0503.5	032.3	56.4
245.0	100.0000	0422.0	113.3	044.3	000.2294	0493.8	033.6	58.4
250.0	100.0000	0424.5	113.6	030.3	000.4197	0565.7	038.3	60.3
255.0	100.0000	0430.0	114.1	020.5	000.4254	0608.6	045.2	58.3
260.0	100.0000	0408.2	112.1	016.5	000.4254	0625.3	054.7	55.1
265.0	100.0000	0384.6	110.0	014.6	000.4254	0628.7	064.4	51.7
270.0	100.0000	0368.8	108.7	013.3	000.4254	0636.6	073.9	48.8
275.0	100.0000	0370.8	108.9	011.9	000.4254	0640.6	083.2	45.9
280.0	100.0000	0390.6	110.6	010.4	000.4254	0647.5	092.6	43.1
285.0	100.0000	0385.5	110.1	010.8	000.4254	0644.4	102.2	40.3
290.0	100.0000	0351.0	107.4	012.7	000.4254	0636.6	111.3	37.7
295.0	100.0000	0330.4	105.9	014.1	000.4254	0632.6	120.3	35.1
300.0	100.0000	0344.7	106.9	014.6	000.4254	0628.7	129.5	32.5
305.0	100.0000	0345.0	106.9	015.7	000.4254	0625.3	138.4	30.1
310.0	100.0000	0353.1	107.5	016.8	000.4254	0622.2	147.4	27.8
315.0	100.0000	0378.2	109.5	017.6	000.4254	0618.5	156.8	25.4
320.0	100.0000	0411.6	112.4	018.3	000.4254	0618.5	166.6	23.0
325.0	100.0000	0418.2	113.0	019.9	000.4254	0608.6	175.1	20.8
330.0	100.0000	0419.3	113.1	021.7	000.4254	0598.5	183.1	19.0
335.0	100.0000	0449.8	115.8	023.0	000.4254	0594.1	192.5	17.2
340.0	100.0000	0463.7	117.1	024.7	000.4254	0586.6	200.8	15.6
345.0	100.0000	0459.6	116.7	026.8	000.4254	0579.6	207.5	14.2
350.0	100.0000	0466.1	117.3	028.7	000.4254	0571.4	214.6	12.9

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Map of KEMV CH 6 TV 47.0 dBu protected contour & NEW FM 71.8 dBu interference contour

