TECHNICAL STATEMENT
K243AM COLORADO SPRINGS, COLORADO
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
NOVEMBER 2016

This Technical Statement is made in support of a minor change application for FM translator station, K243AM licensed to Colorado Springs, Colorado, facility ID 139085. It seeks to relocate to an existing 9.1 meter un-registered tower site. The following will show that the new proposed operation of K243AM will meet all of the Commissions technical requirements for an FM translator station.

The new proposed operation of K243AM specifies a maximum Effective Radiated Power of 0.022 kilowatts. It will operate with a directional antenna with an "off the shelf" type antenna, or a Scala Model CA-2-CP, circular polarized yagi type antenna with its maximum lobe oriented at 90 degrees. The antenna will be mounted on an existing tower with an over height of 9.1 meters above the ground. The antenna will be mounted with a Center of Radiation of 9 meters above the ground, and 2179 meters Above Mean Sea Level. The coordinates of this tower are located at N 38° 48' 37", W 104° 52' 54". There are no other broadcast antennas mounted on this tower at this time.

Figure 1 is a detailed interference study conducted on channel 243D with these new proposed facilities. It shows that the new operation of K243AM will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 243, with the exceptions of 2nd adjacent channel stations KCCY Pueblo, Colorado operating on channel 245C, facility ID 40847 and KIBT Fountain, Colorado, on channel 241C2, facility ID 66669. The proposed operation of

K243AM on 243D is located within the protected 60 dBμ contour of 2nd adjacent channel of KCCY and KIBT.

Figure 2 shows the predicted F(50-50) field strength of KCCY at the proposed K243AM transmitter site is 107.0 dBμ. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K243AM on channel 243D is an additional 40 dBμ or 147.0 dBμ.

Figure 3 shows the predicted F(50-50) field strength of KIBT at the proposed K243AM transmitter site is 84.9 dBμ. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K243AM is 124.9 dBμ. Since this is a lower value then KCCY's 147.0 dBμ interference contour, only the lower 124.9 interference contour generated by K243AM was studied further.

Figure 4 shows the coverage area for the 124.9 dBμ interference contour F(50-10) and shows that there is no population in the area of interference. This contour only extends 18.7 meters. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private access. The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K243AM until such interference can be eliminated.

Figure 5 is the directional antenna data for the proposed Scala CA-2-CP antenna system proposed to be used.

Figure 6 shows that the proposed operation of K243AM will 60 dBμ overlap with the currently licensed operation of K243AM as required.

Figure 7 is an Effective Radiated Power calculation chart to show compliance with the maximum power requirements for an FM translator

It was found that the new proposed operation of K243AM Colorado Springs, Colorado on channel 243D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTEFERENCE STUDY
K243AM COLORADO SPRINGS, CO, CH. 243D

REFERENCE CH# 243D - 96.5 MHz, Pwr= 0.022 kW DA, HAAT= -148.8 M, COR= 2179 M DISPLAY DATES
38 48 37.0 N. Average Protected F(50-50)= 3.83 km DATA 11-23-16
104 52 54.0 W. Standard Directional SEARCH 11-25-16

CH CITY	CALL STATE	TYPE	ANT <--	AZI	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
243C Evergreen	KXPK CO	LIC	_CN	331.8 151.4	109.38 BLH19940701KC	39 40 35.0 105 29 09.0	100.000 530	205.7 3281	94.0 Entravision Holdings, Llc	-99.2*	2.7
245C Pueblo	KCCY-FM CO	LIC	_CY	166.3 346.3	7.42 BLH19940217KC	38 44 43.0 104 51 41.0	72.000 695	15.0 2946	98.7 Capstar Tx, Llc	-14.2*	-91.3*
243D Colorado Springs	~~K243AM~~ CO	LIC	DC_	246.5 66.4	10.46 BLFT20111003AUX	38 46 22.0 104 59 32.0	0.010 917	60.5 3775	12.2 Mountain Community Transla	-59.5*	-7.5
241C2 Fountain	KIBT CO	LIC	NCX	166.4 346.5	7.39 BLH20060503AAK	38 44 44.0 104 51 42.0	0.460 661	1.5 2872	44.1 Amfm Texas Licenses Llc	0.5	-36.8*
243D Pueblo	K243CI CO	CP	_C_	163.7 343.8	62.96 BMPFT20160129ANK	38 15 57.0 104 40 44.0	0.250	23.8 1507	7.1 Catholic Radio Network, In	30.0	45.5
243C2 Raton	KBKZ NM	LIC	_CX	169.8 350.1	204.93 BLH20040927AEI	36 59 33.0 104 28 24.0	5.400 295	120.7 2609	50.1 Phillips Broadcasting Comp	75.9	147.8
243C3 Del Norte	KSLV-FM CO	LIC	NC_	231.6 50.6	191.55 BLH20081024AAU	37 43 47.0 106 35 18.0	0.930 485	113.2 3343	43.7 San Luis Valley Broadcasti	76.6	143.1
241D Englewood	K262BV CO	CP	DC_	2.3 182.4	88.30 BMPFT20160729AFA	39 36 18.0 104 50 23.0	0.250	0.1 1761	2.8 Mountain Community Transla	81.5	85.1
245D Golden	K244AB CO	CP	DC_	343.5 163.3	106.92 BPFT20160729ALH	39 43 59.0 105 14 12.0	0.001	0.0 2249	1.0 Mainstreet Media Of Colora	102.2	103.8
245D Golden	K244AB CO	APP	DC_	343.5 163.3	106.92 BMPFT20161121AAF	39 43 59.0 105 14 12.0	0.075	0.0 2249	0.7 Mainstreet Media Of Colora	102.2	103.7
245D Arvada	K245AD CO	LIC	DC_	345.8 165.6	123.96 BLFT20160505AFU	39 53 31.0 105 14 19.0	0.099	0.3 1930	7.6 Mainstreet Media Of Colora	118.6	114.3
243D Boulder	KXPK-FM1 CO	LIC	DCN	347.6 167.4	130.84 BLFTB19950119TD	39 57 38.0 105 12 44.0	0.500 -52	5.3 1753	1.7 Entravision Holdings, Llc	120.4	126.7
241C1 Greeley	KSME CO	LIC	_C_	358.6 178.6	207.71 BLH20010411AAR	40 40 50.0 104 56 32.0	100.000 224	9.6 1819	70.1 Citicasters Licenses, Inc.	191.7	137.4
246C1 Stratton	DKGGY CO	VAC	___	73.8 255.3	208.89	39 18 34.0 102 33 17.0	100.000 299	9.4 1620	69.2 Kona Coast Radio, Llc	186.8	139.2
246C3 La Jara	KZBR CO	LIC	_CX	214.3 33.5	193.07 BLH20080416AAD	37 22 05.0 106 06 44.0	25.000 55	4.8 2458	44.3 Wolf Creek Broadcasting, L	185.4	148.6
246A Crested Butte	KAYV CO	LIC	_CX	273.9 92.6	181.80 BLH20111205AGJ	38 54 10.0 106 58 22.0	0.300 -211	1.2 2967	7.4 Arkansas Valley Broadcasti	178.6	169.2
244A Carbondale	KUUR CO	LIC	NCX	288.3 106.7	225.52 BLH20050920ADE	39 25 08.0 107 22 10.0	0.090 764	51.8 3218	33.8 Colorado Radio Marketing,	171.8	188.4
245A Nunn	KYAP CO	CP	NCX	359.9 179.9	218.78 BMPH20141029AAP	40 46 51.0 104 53 15.0	4.300 115	2.8 1777	30.4 Appaloosa Broadcasting Com	209.4	187.9
245C2 Steamboat Springs	KBCR-FM CO	LIC	_H_	318.1 136.8	249.31 BMLH20010118ACB	40 27 43.0 106 50 57.0	27.500 203	3.3 2542	33.3 Blizzard Broadcasting Llc	243.8	190.7
243C1 Julesburg	KJBL CO	APP	_CX	44.6 226.5	352.03 BPH20160613AAP	41 01 33.0 101 56 11.0	100.000 154	149.0 1209	53.4 Armada Media - Mccook, Inc	192.3	267.2
241C0 Montrose	KSTR-FM CO	LIC	_CY	272.5 90.4	290.43 BMLH20121127AWU	38 52 40.0 108 13 33.0	100.000 335	3.2 2325	31.0 Mbc Grand Broadcasting, In	285.3	221.7
244C2 Laramie	KYAP WY	LIC	NCX	350.3 170.0	279.20 BLH20070130AIV	41 17 15.0 105 26 38.0	4.800 313	49.1 2730	32.5 Appaloosa Broadcasting Com	224.6	242.8
241C3 Chama	KZRM NM	LIC	_CX	215.9 34.9	260.61 BLH20081120AEN	36 53 56.0 106 36 06.0	25.000 92	2.3 2659	22.7 Chama Broadcasting Corpora	255.6	232.6
245A Hotchkiss	KYKL CO	CP	NCX	271.1 89.2	265.53 BPED20160429ABB	38 49 04.0 107 56 20.0	6.000 54	2.1 1788	21.0 Educational Media Foundati	261.4	232.9
240C3 Hayden	KIDN-FM CO	LIC	_CX	313.4 131.9	281.08 BLH20031113AGU	40 31 16.0 107 17 46.0	6.000 198	4.0 2252	43.1 Alwaysmountaintime, Llc	275.4	237.9

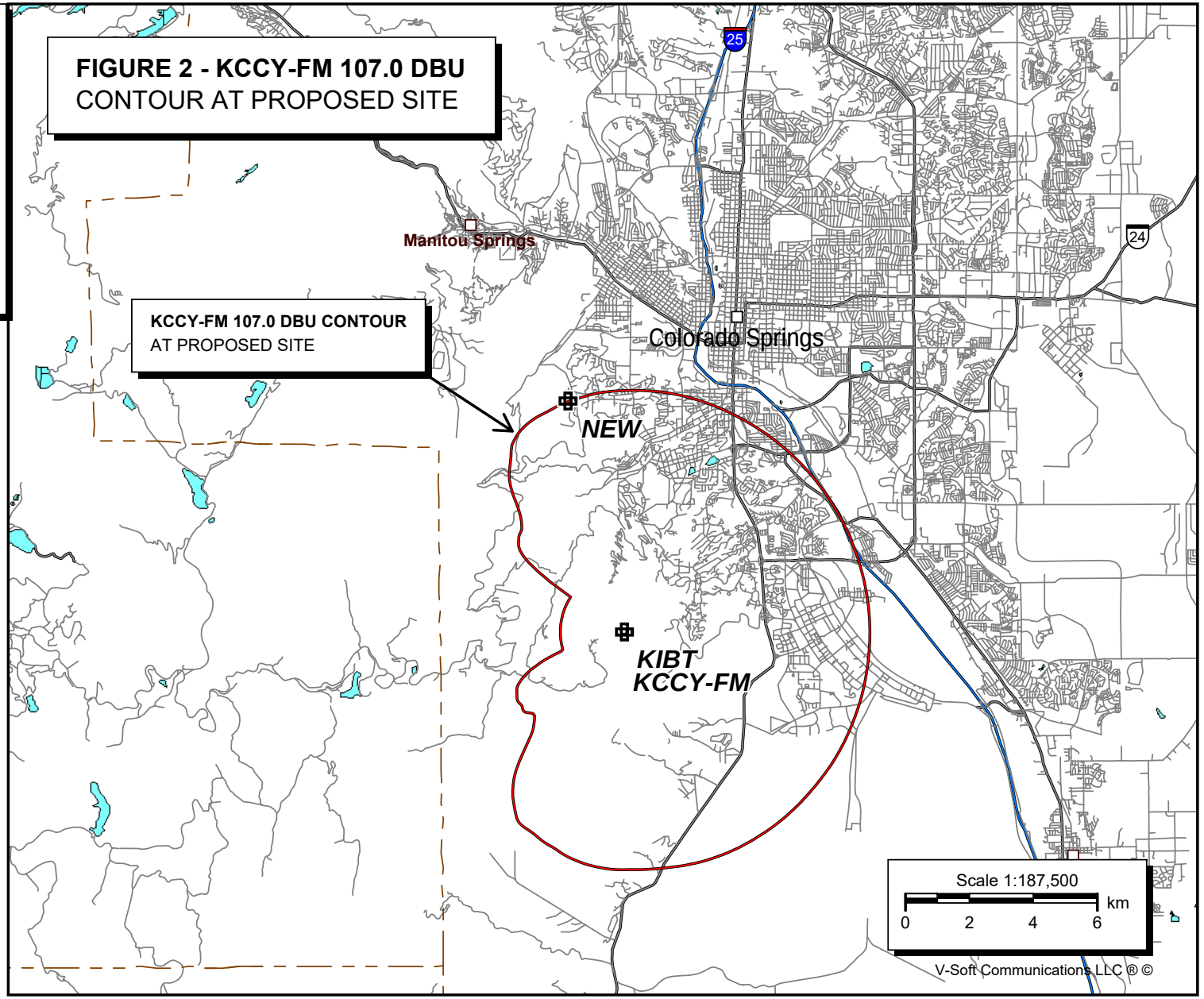
CH CALL / CITY	TYPE ANT / STATE	AZI / <--	DIST / FILE #	LAT / LNG	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* / (Overlap in km)	*OUT* / in km)
240C3 KIDN-FM Hayden	CP _CX CO	313.4 131.9	281.08 BPH20140311ACI	40 31 16.0 107 17 46.0	6.000 198	4.0 2252	43.1 Alwaysmountaintime, Llc	275.4	237.9
240A KKIT Taos	LIC NCX NM	193.2 12.8	275.73 BMLH20151221CQU	36 23 23.9 105 35 10.8	4.000 -192	1.6 2145	14.2 L.m.n.o.c. Broadcasting Ll	268.4	261.6
246C1 KCMI Terrytown	LIC _CX NE	17.2 197.9	336.91 BLH20160525AAB	41 42 08.0 103 41 00.0	100.000 211	7.7 1521	61.6 Christian Media Incorporat	320.9	275.2
243L1 KLDK-LP Dixon	LIC ___ NM	197.6 16.9	302.51 BLL20041229ABL	36 12 29.0 105 54 00.0	0.100	 1940	 Embudo Valley Community Li	278.8	294.5
245C0 KDAG Farmington	LIC _CX NM	230.9 49.1	345.47 BLH20060309AED	36 48 52.0 107 53 32.0	100.000 303	7.4 2129	60.3 Capstar Tx, Llc	336.2	284.6
243A KJBL Julesburg	LIC _CX CO	41.9 223.5	329.64 BLH20060825ABR	40 59 18.0 102 15 44.0	0.265 -32	24.1 1074	7.2 Armada Media - Mccook, Inc	295.0	292.8
244L1 KSHF-LP Espanola	LIC ___ NM	198.6 17.8	329.48 BLL20150129AGD	35 59 28.0 106 02 53.0	0.100	 1766	 Holy Cross, A New Mexico N	316.5	322.2
244C3 KMDZ Las Vegas	LIC _CX NM	184.8 4.6	359.72 BLH20150918ABL	35 34 48.0 105 12 59.0	6.500 -68	24.0 1969	16.1 Sangre De Cristo Broadcast	328.9	342.0

Terrain database is 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. 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.

* No actual interference will be caused to either KCCY-FM or KIBT(FM), since the worse case 124.9 DBU Interference Contour will not cover any population. See the Technical Statement for more details.

NEW

Latitude: 38-48-37 N
Longitude: 104-52-54 W
ERP: 0.022 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 2179.0 m
Elevation: 2122.287 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:



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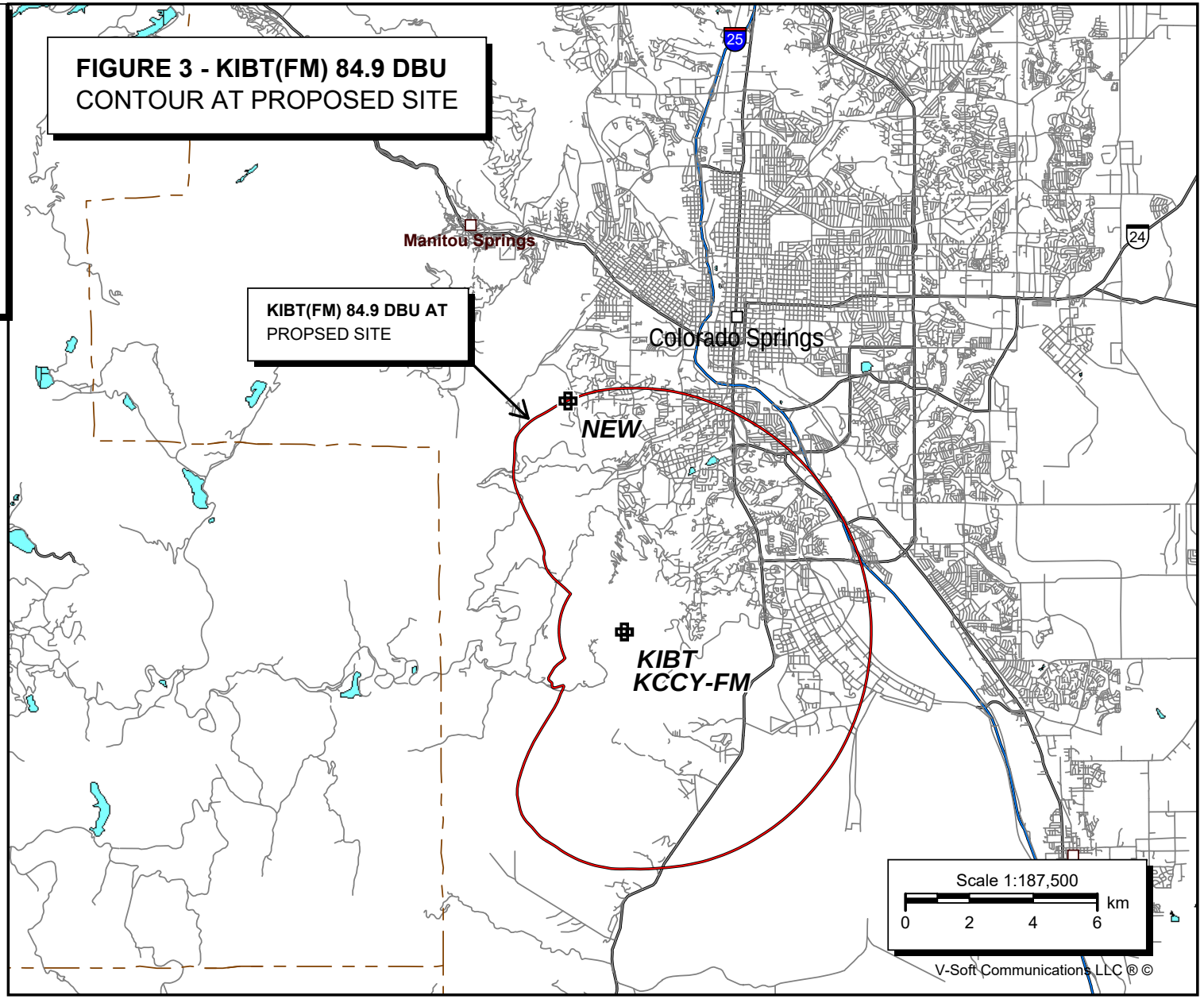

FIGURE 4 - PREDICTED 124.9 DBU INTERFERENCE CONTOUR
K243AM COLORADO SPRINGS, CO, CH. 243D

Coverage Study - NGDC 30 SEC
11-25-2016

K243AM CH243 D , 0.022 kW, -148.8m HAAT, 2179.0m COR AMSL
Interference Contour = 124.9 dBu. Population = 0

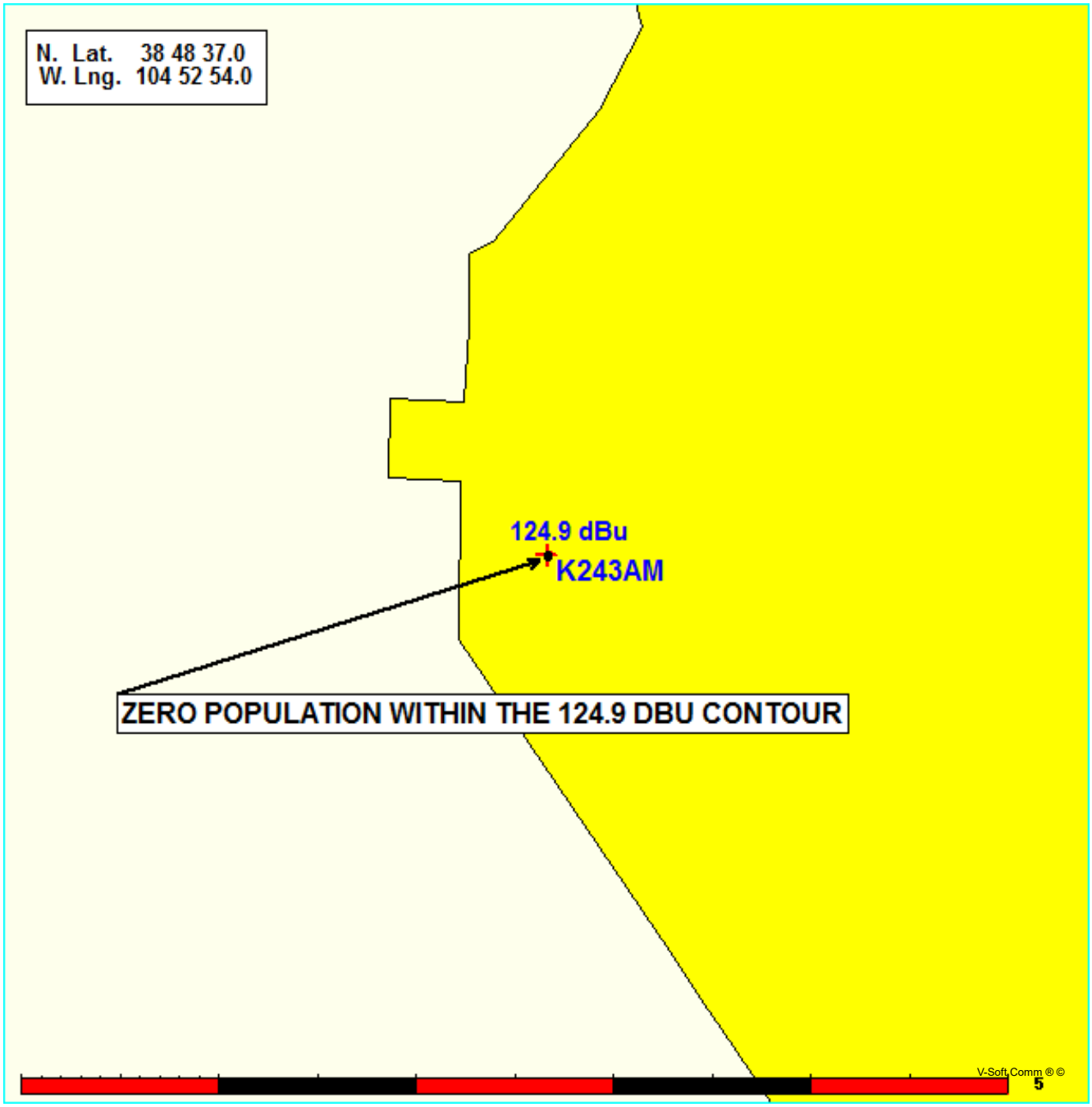

FIGURE 5 - DIRECTIONAL ANTENNA DATA

K243AM 11-25-2016 RMS(V)= .484

Azi	Field	dBk	kW
000	0.030	-47.033	0.000
010	0.045	-43.512	0.000
020	0.187	-31.139	0.001
030	0.388	-24.799	0.003
040	0.570	-21.458	0.007
050	0.715	-19.490	0.011
060	0.829	-18.205	0.015
070	0.920	-17.300	0.019
080	0.979	-16.760	0.021
090	1.000	-16.576	0.022
100	0.979	-16.760	0.021
110	0.920	-17.300	0.019
120	0.829	-18.205	0.015
130	0.715	-19.490	0.011
140	0.570	-21.458	0.007
150	0.388	-24.799	0.003
160	0.187	-31.139	0.001
170	0.045	-43.512	0.000
180	0.030	-47.033	0.000
190	0.032	-46.473	0.000
200	0.037	-45.212	0.000
210	0.046	-43.321	0.000
220	0.065	-40.318	0.000
230	0.142	-33.530	0.000
240	0.202	-30.469	0.001
250	0.234	-29.191	0.001
260	0.250	-28.617	0.001
270	0.260	-28.276	0.001
280	0.250	-28.617	0.001
290	0.234	-29.191	0.001
300	0.202	-30.469	0.001
310	0.142	-33.530	0.000
320	0.065	-40.318	0.000
330	0.046	-43.321	0.000
340	0.037	-45.212	0.000
350	0.032	-46.473	0.000

Graph is Relative Field

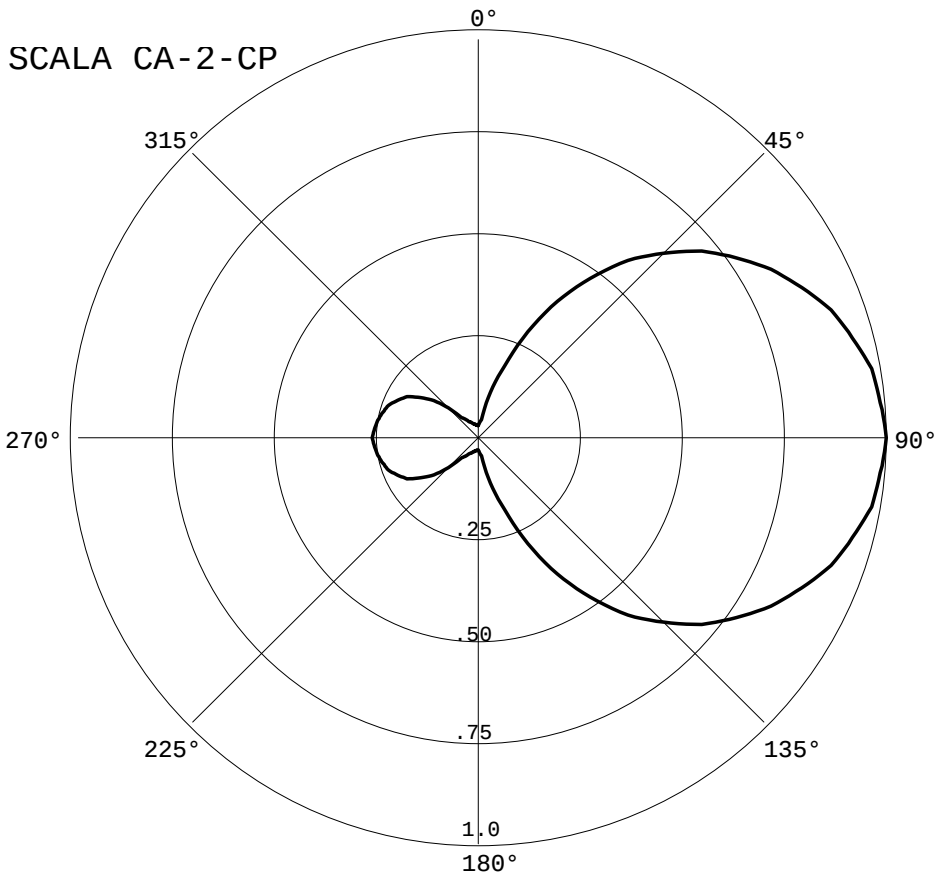

FIGURE 6 - PRESENT AND PROPOSED 60 DBU
K243AM COLORADO SPRINGS, CO, CH. 243D

Coverage Study - NGDC 30 SEC
11-25-2016

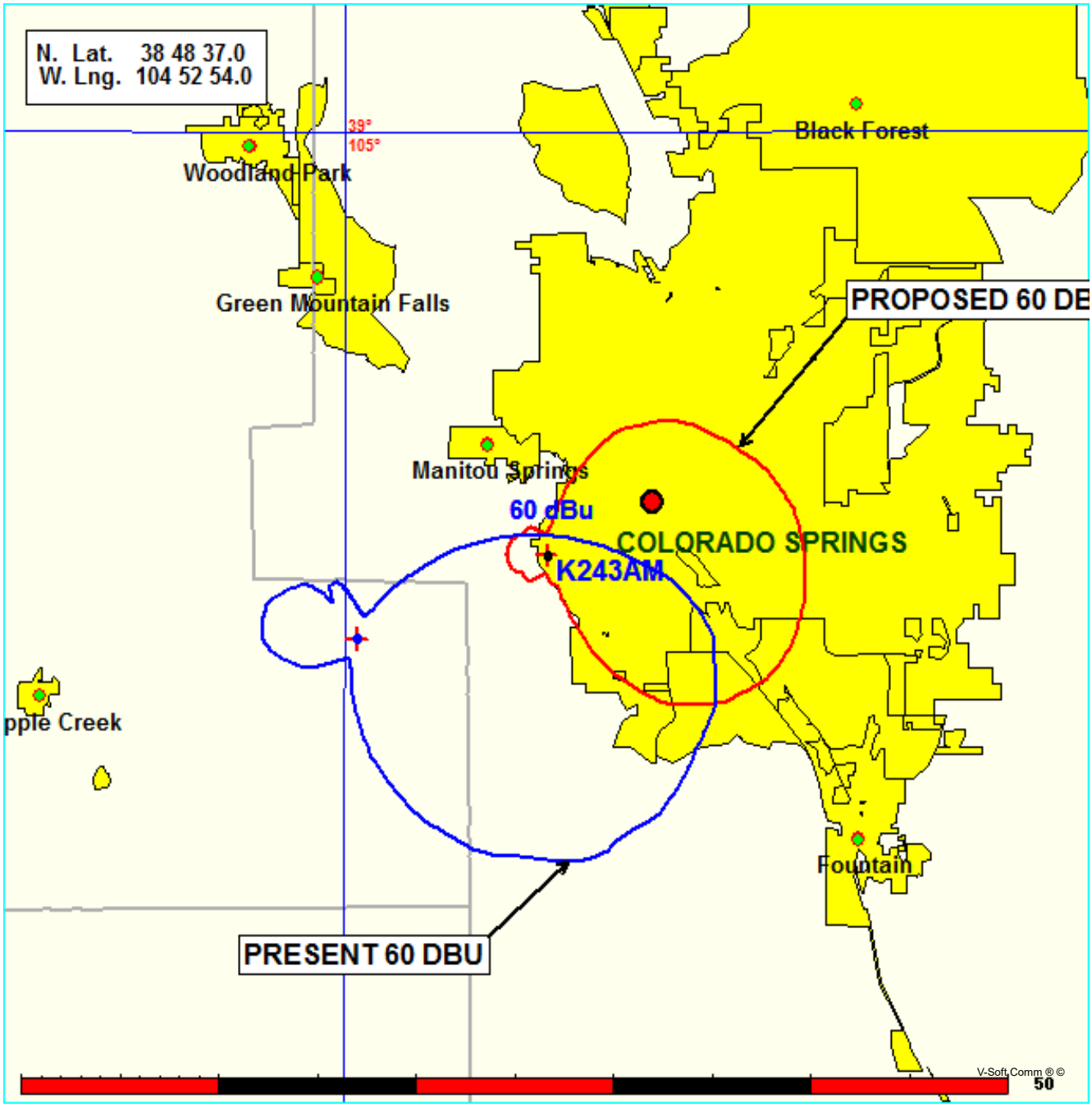

FIGURE 7
COMPLIANCE WITH 74.1235(b)(2)
EFFECTIVE RADIATED POWER CALCULATIONS
K243AM COLORADO SPRINGS, COLORADO
NOVEMBER 2016

The following table will shows compliance with the maximum Effective Radiated Power limitations according to 74.1235(b)(2) for an FM translator station located West of the Mississippi River.

K243AM proposes to use a directional antenna system, which will limit the Maximum ERP on some of the 12 pertinent average terrain radials. The maximum ERP for this antenna will be 0.022 KW (22 watts) at an azimuth of 90 degrees.

Azimuth	COR HAAT	Maximum Power Allowed	Proposed ERP
0	145.7 meters	115 watts	Less then 1 watt
30	268.0 meters	34.0 watts	3 watts
60	278.4 meters	34.0 watts	15 watts
90	338.8 meters	23.0 watts	22 watts
120	387.4 meters	15.5 watts	15 watts
150	265.2 meters	34.0 watts	3 watts
180	(-175.9) meters	250 watts	Less then 1 watt
210	(-642.0) meters	250 watts	Less then 1 watt
240	(-874.7) meters	250 watts	1 watt
270	(-1065.5) meters	250 watts	1 watt
300	(-587.8) meters	250 watts	1 watt
330	(-163.7) meters	250 watts	Less then 1 watt

The proposed operation of K243AM operating with a maximum ERP of 0.032 Kilowatts was found to be in compliance with 74.1235(b)(2).