

TECHNICAL STATEMENT
K239CH COLORADO SPRINGS, COLORADO
UNITED STATES CP, LLC
FCC FORM 349
APRIL 2018

This technical statement is made on behalf of United States CP, LLC, licensee of K239CH Colorado Springs, Colorado facility ID 158522. This application seeks to modify its licensed operation. It proposes to relocate K239CH to an existing 9 meter un-registered tower, located at N38° 48' 37", W104° 52' 53.7", NAD 27.

K239CH proposes to operate with an Effective Radiated Power of 99 watts (0.099 kw) with circular polarization utilizing a Scala CA-2-CP two element directional yagi antenna. The antenna will be mounted at the 8 meter level on the 9 meter overall tower, with a Center of Radiation at 2178 Meters Above Mean Sea Level.

Figure 1 shows a detailed channel interference study conducted from the proposed site for K239CH. It shows that the only pertinent stations concerned for interference that required more study is 3rd adjacent station KATC-FM Colorado Springs, Colorado, facility ID 66249, operating on channel 236C and 2nd adjacent channel KIBT(FM) Fountain, Colorado, facility ID 66669 on channel 241C2

The proposed operation of K239CH is located within the protected 60 dBu contour of 3rd adjacent channel station KATC-FM and 2nd adjacent channel station KIBT. Figure 2 documents that KATC-FM places a 106.9 dB μ contour at the proposed K239CH tower site. Thus, the worse case interference contour would be calculated by adding 40 dB μ to the KATC-FM contour at the site, or 146.9 dB μ .

Figure 3 documents that KIBT places a 84.9 dB μ contour at the proposed K239CH tower site. Thus, the worse case interference contour would be calculated by adding 40 dB μ to the KIBT contour at the site, or 124.9 dB μ .

Figure 4 shows the “worst case” predicted 124.9 dB μ interference contour (F50-10). There is no population located with the 124.9 dB μ contour, thus there will be no “real life” interference caused to KIBT or KATC-FM. The applicant, United States CP, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the commission rules based on there is no population within the area of predicted interference. The transmitter building is un-habited.

Figure 5 shows the directional antenna data for the proposed antenna to be utilized by K239CH.

Figure 6 shows that the 60 dB μ contour of the currently licensed K239CH Colorado Springs and the proposed 60 dB μ contour for this application. The map shows that the two 60 dB μ contours overlap as required.

Figure 7 shows that the proposed 60 dB μ of K239CH will be completely contained inside of the proposed fill-in station 2 mV/m daytime contour to be rebroadcast, KCBR(AM) Monument, Colorado, facility ID 10846, operating on channel 1040 Khz.

It was concluded that the new proposed operation of K239CH Colorado Springs, Colorado on channel 239D will not cause any harmful interference to any existing stations and will be in full compliance of the commission rules.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K239CH COLORADO SPRINGS, CO, CH. 239D

REFERENCE 38 48 37.0 N. CH# 239D - 95.7 MHz, Pwr= 0.099 kW DA, HAAT= -149.5 M, COR= 2178 M DISPLAY DATES
 104 52 53.7 W. Average Protected F(50-50)= 5.62 km DATA 04-20-18
 Standard Directional SEARCH 04-22-18

CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
236C Colorado Springs	KATC-FM	LIC _C_ CO	166.0 346.0	7.43 BLH20060622ABT	38 44 43.0 104 51 39.0	72.000 695	15.0 2946	98.7 Radio License Holding Cbc,	-15.4*	-91.4*
239C0 Denver	KPTT	LIC DCX CO	343.5 163.3	106.91 BLH20071003ACN	39 43 59.0 105 14 10.0	100.000 346	177.2 2256	69.0 Citicasters Licenses, Inc.	-75.4*	17.5
239D Colorado Springs	K239CH	LIC _C_ CO	84.0 264.1	9.25 BLFT20161024AAJ	38 49 08.0 104 46 32.0	0.099	9.25 1908	9.25 United States Cp, Llc	64.5R	-55.3M
241C2 Fountain	KIBT	LIC NCX CO	166.5 346.5	7.39 BLH20060503AAK	38 44 44.0 104 51 42.0	0.460 661	1.5 2872	44.2 Amfm Texas Licenses Llc, A	-0.5	-36.9*
239D Buena Vista, Etc	K239AE	LIC _CN CO	247.9 67.2	106.27 BLFT19980923TE	38 26 48.0 106 00 38.0	0.250 886	115.4 3573	46.0 The Colorado College	-11.8*	52.2
238C1 Rocky Ford	KPHT	LIC _CX CO	151.8 332.2	114.23 BMLH20080204ACH	37 54 08.0 104 16 00.0	100.000 224	102.2 1762	69.0 Capstar Tx, Llc, As Debtor	-4.3	21.6
238D Pueblo	KPHT-FM1	LIC DE_ CO	157.1 337.2	54.41 BLFTB20060926ADT	38 21 32.0 104 38 17.0	11.000	8.4 1626	4.5 Capstar Tx, Llc, As Debtor	31.8	24.3
238D Lake George	K238BP	LIC _C_ CO	296.1 115.7	60.74 BLFT20161011ABG	39 02 55.0 105 30 44.0	0.010	26.0 3441	16.0 The Colorado College	31.9	40.8
241D Englewood	K241CP	LIC DC_ CO	343.5 163.3	106.93 BLFT20180116AAM	39 43 59.0 105 14 12.0	0.099	0.7 2237	15.7 Mountain Community Transla	100.9	87.0
237D Denver	K237GG	LIC DE_ CO	343.5 163.3	106.51 BLFT20160608AAD	39 43 46.0 105 14 08.0	0.065	0.1 2251	5.2 Klz Radio, Inc.	101.1	98.1
237D Breckenridge, Etc.	K237BI	LIC DCN CO	307.8 127.1	119.67 BLFT19860130TC	39 27 50.0 105 58 56.0	0.054 393	0.1 3726	4.4 Skandia, Llc	116.9	114.2
236D Commerce City	K236CQ	LIC DC_ CO	5.8 185.9	127.98 BLFT20161018AAK	39 57 25.0 104 43 44.0	0.250	0.6 1660	7.3 Klz Radio, Inc.	118.5	118.3
241C1 Greeley	KSME	LIC _C_ CO	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.	190.2	137.4
238C2 Glenwood Springs	KRVG	LIC _CX CO	288.3 106.7	225.29 BLH20081112ALM	39 25 05.0 107 22 01.0	1.000 736	82.9 3169	56.0 Western Slope Communicatio	139.5	164.9
237A Monte Vista	KYDN	LIC _CN CO	219.9 39.1	174.05 BMLH19950526KD	37 36 10.0 106 08 58.0	6.000 27	2.4 2387	24.2 San Luis Valley Broadcasti	167.6	149.8
238D West Glenwood	KRVG-FM1	LIC DV_ CO	292.5 110.9	226.28 BLFTB20010806ACA	39 33 40.0 107 18 59.0	0.500	11.7 2219	8.3 Western Slope Communicatio	211.7	206.8
240C3 Hayden	KIDN-FM	CP _CX CO	313.4 131.9	281.08 BPH20140311ACI	40 31 16.0 107 17 46.0	6.000 198	63.8 2252	43.1 Alwaysmountaintime, Llc	214.6	234.6
240C3 Hayden	KIDN-FM	LIC _CX CO	313.4 131.9	281.08 BLH20031113AGU	40 31 16.0 107 17 46.0	6.000 198	63.8 2252	43.1 Alwaysmountaintime, Llc	214.6	234.6
239C1 Farmington	KPCL	LIC NCX NM	230.9 49.1	345.43 BLH20121105ALT	36 48 53.0 107 53 31.0	26.500 313	128.1 2147	50.2 Voice Ministries Of Farmin	215.1	290.3
241C0 Montrose	KSTR-FM	LIC _CY CO	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	284.4	221.6
236C Laramie	KCGY	LIC _CX WY	350.2 169.9	281.85 BLH20150902AAR	41 18 37.1 105 27 14.6	100.000 332	6.8 2734	56.4 Townsquare Media Laramie L	268.4	222.9
236C0 Delta	KKNN	LIC _CN CO	272.5 90.4	290.36 BMLH19870227PC	38 52 40.0 108 13 30.0	100.000 434	3.2 2297	31.0 Townsquare Media Grand Jun	284.4	223.3
241C3 Chama	DKZRM	VAC ____ NM	215.9 34.9	260.58	36 53 58.0 106 36 07.0	25.000 100	2.3 2671	22.7 Lance Broadcasting Llc	253.4	229.8
238C3 Pine Bluffs	KEZF	LIC NCX WY	12.2 192.7	297.29 BLH20150326ABZ	41 25 29.0 104 07 45.0	9.200 160	53.7 1765	35.3 United States Cp, Llc	233.6	257.8
240A Taos	KKIT	LIC NCX NM	193.2 12.8	275.73 BMLH20151221CQU	36 23 23.9 105 35 10.8	4.000 -192	21.1 2145	14.2 L.m.n.o.c. Broadcasting Ll	245.3	260.0

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CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
238A	KRKQ Mountain Village	LIC NHX CO		252.3 70.4	284.89 BMLH20150821AAH	37 59 29.0 107 58 21.0	0.250 448	10.1 3358	7.1 Brown Mountain Broadcastin	272.0	259.0
238C1	KHFM Santa Fe	LIC _C_ NM		203.9 22.9	366.55 BMLED20170504AAY	35 46 49.0 106 31 37.0	19.000 546	87.1 3036	60.2 The American General Media	272.2	303.4
239L1	KLYN-LP Las Vegas	LIC ____ NM		185.5 5.3	357.36 BLL20061122AEB	35 36 16.0 105 15 35.0	0.003 170	2196	330.2 The Rock Christian Outreac		348.8

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.
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 KATC-FM or KIBT since the worse case 124.9 DBU contour will not cover any population. See the Technical Statement for more details.

K239CH

BPFT20180417AAW

Latitude: 38-48-37 N

Longitude: 104-52-53.70 W

ERP: 0.099 kW

Channel: 239

Frequency: 95.7 MHz

AMSL Height: 2178.0 m

Elevation: 2170.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

KATC-FM

BLH20060622ABT

Latitude: 38-44-43 N

Longitude: 104-51-39 W

ERP: 72.00 kW

Channel: 236

Frequency: 95.1 MHz

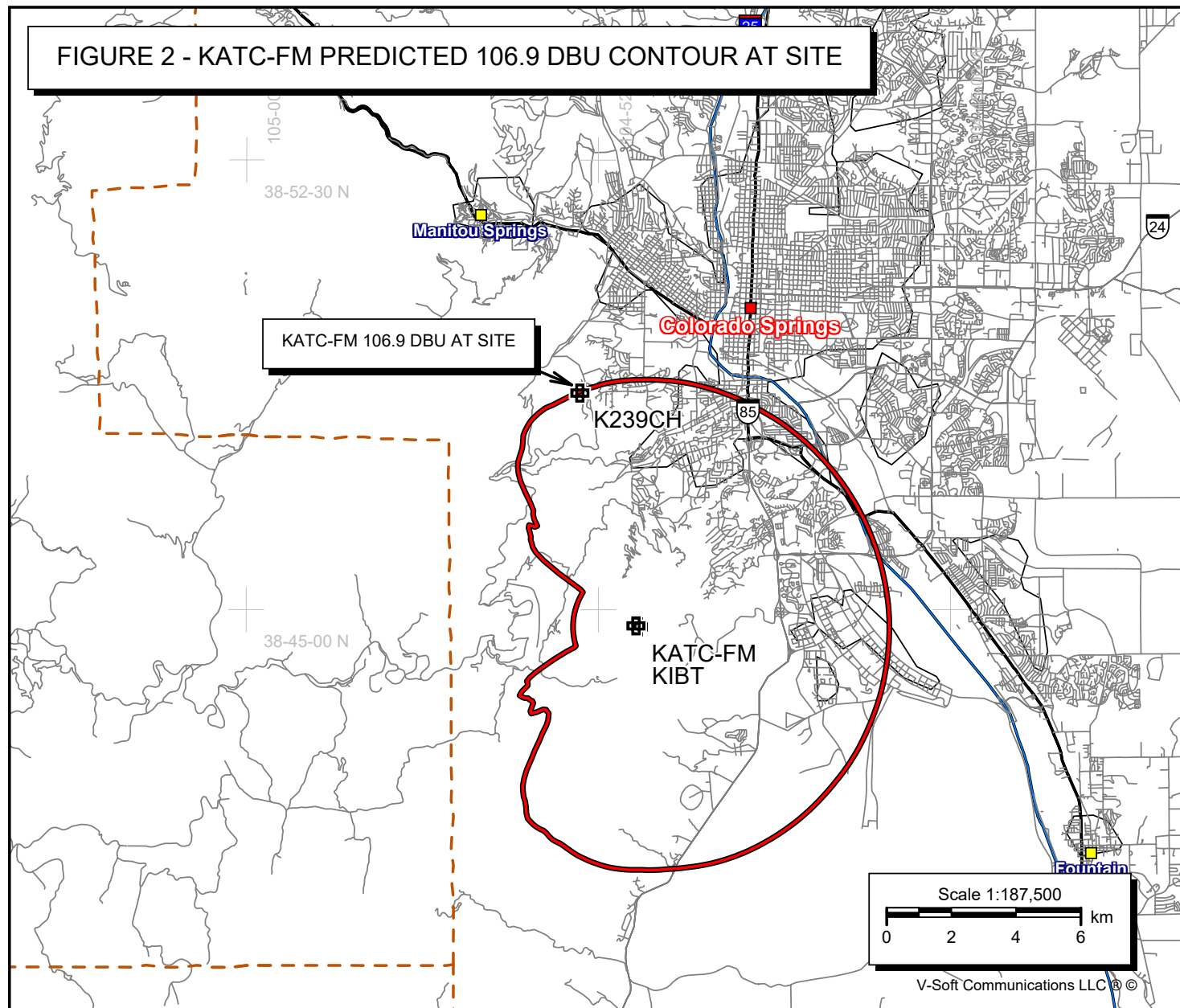
AMSL Height: 2946.0 m

Elevation: 2868.0 m

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model: None

FIGURE 2 - KATC-FM PREDICTED 106.9 DBU CONTOUR AT SITE

K239CH

BPFT20180417AAW
Latitude: 38-48-37 N
Longitude: 104-52-53.70 W
ERP: 0.099 kW
Channel: 239
Frequency: 95.7 MHz
AMSL Height: 2178.0 m
Elevation: 2170.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KIBT

BLH20060503AAK
Latitude: 38-44-44 N
Longitude: 104-51-42 W
ERP: 0.46 kW
Channel: 241
Frequency: 96.1 MHz
AMSL Height: 2872.0 m
Elevation: 2840.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

FIGURE 3 - KIBT(FM) PREDICTED 84.9 DBU CONTOUR AT SITE

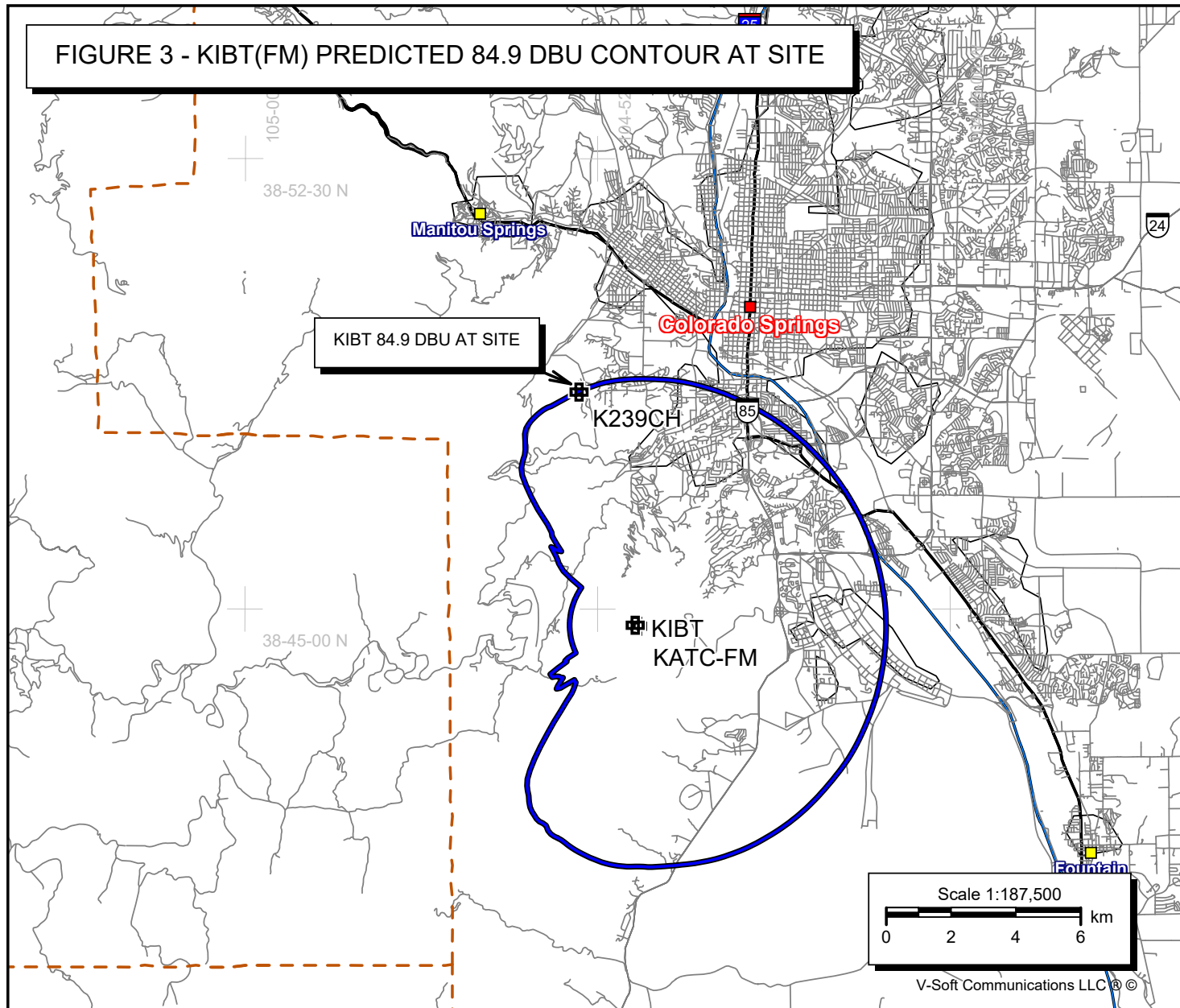


FIGURE 4 - PREDICTED 124.9 DBU INTERFERENCE CONTOUR
K239CH COLORADO SPRINGS, CO, CH. 239D

Coverage Study - NGDC 30 SEC
04-22-2018

K239CH CH239 D , 0.099 kW, -149.5m HAAT, 2178.0m COR AMSL
Interference Contour = 124.9 dBu. Population = 0

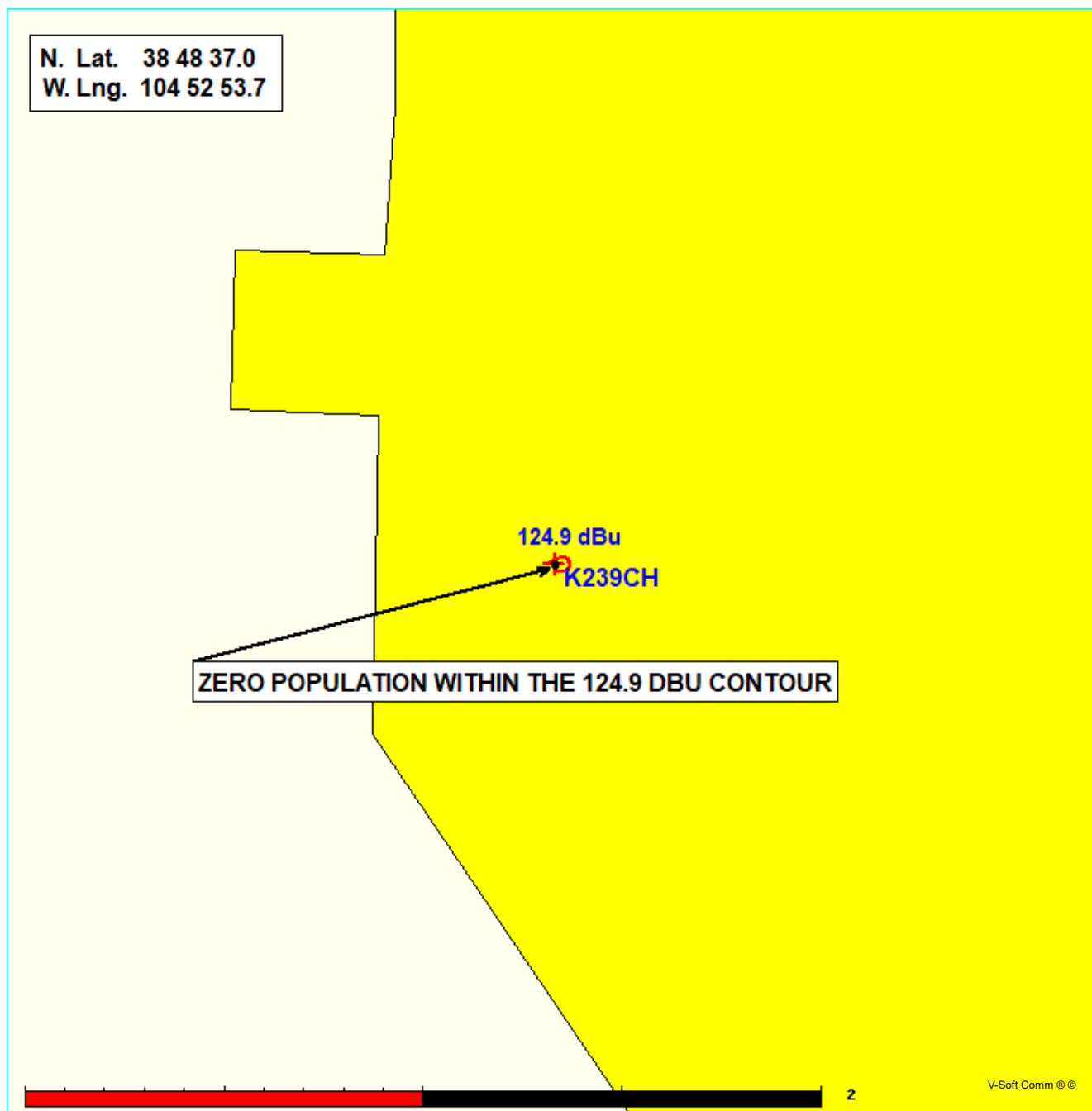


FIGURE 5 - DIRECTIONAL ANTENNA DATA

K239CH

04-22-2018

RMS(V)= .484

SCALA CA2-CP DIRECTIONAL YAGI

Graph is Relative Field

Azi	Field	dBk	kw
000	0.032	-39.941	0.000
010	0.030	-40.501	0.000
020	0.045	-36.979	0.000
030	0.187	-24.607	0.003
040	0.388	-18.267	0.015
050	0.570	-14.926	0.032
060	0.715	-12.958	0.051
070	0.829	-11.673	0.068
080	0.920	-10.768	0.084
090	0.979	-10.228	0.095
100	1.000	-10.044	0.099
110	0.979	-10.228	0.095
120	0.920	-10.768	0.084
130	0.829	-11.673	0.068
140	0.715	-12.958	0.051
150	0.570	-14.926	0.032
160	0.388	-18.267	0.015
170	0.187	-24.607	0.003
180	0.045	-36.979	0.000
190	0.030	-40.501	0.000
200	0.032	-39.941	0.000
210	0.037	-38.680	0.000
220	0.046	-36.788	0.000
230	0.065	-33.785	0.000
240	0.142	-26.998	0.002
250	0.202	-23.937	0.004
260	0.234	-22.659	0.005
270	0.250	-22.085	0.006
280	0.260	-21.744	0.007
290	0.250	-22.085	0.006
300	0.234	-22.659	0.005
310	0.202	-23.937	0.004
320	0.142	-26.998	0.002
330	0.065	-33.785	0.000
340	0.046	-36.788	0.000
350	0.037	-38.680	0.000

oriented at 100 degrees

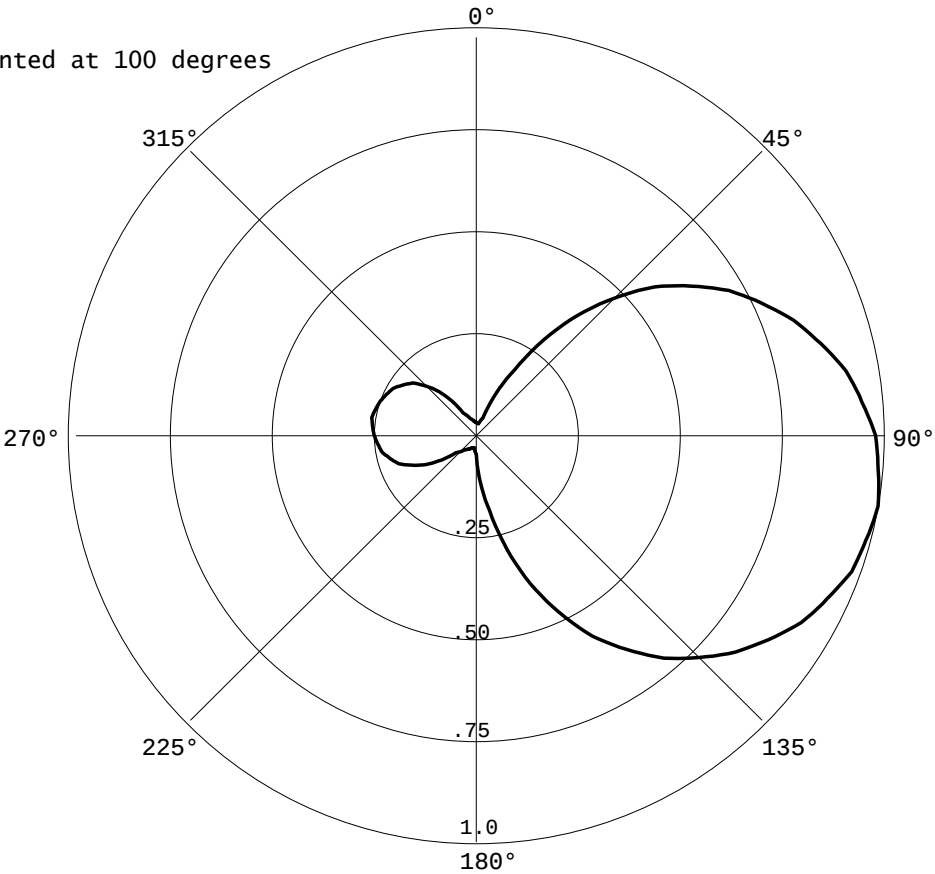


FIGURE 6 - PRESENT AND PROPOSED 60 DBU CONTOURS
K239CH COLORADO SPRINGS, CO, CH. 239D

Coverage Study - NGDC 30 SEC
04-22-2018

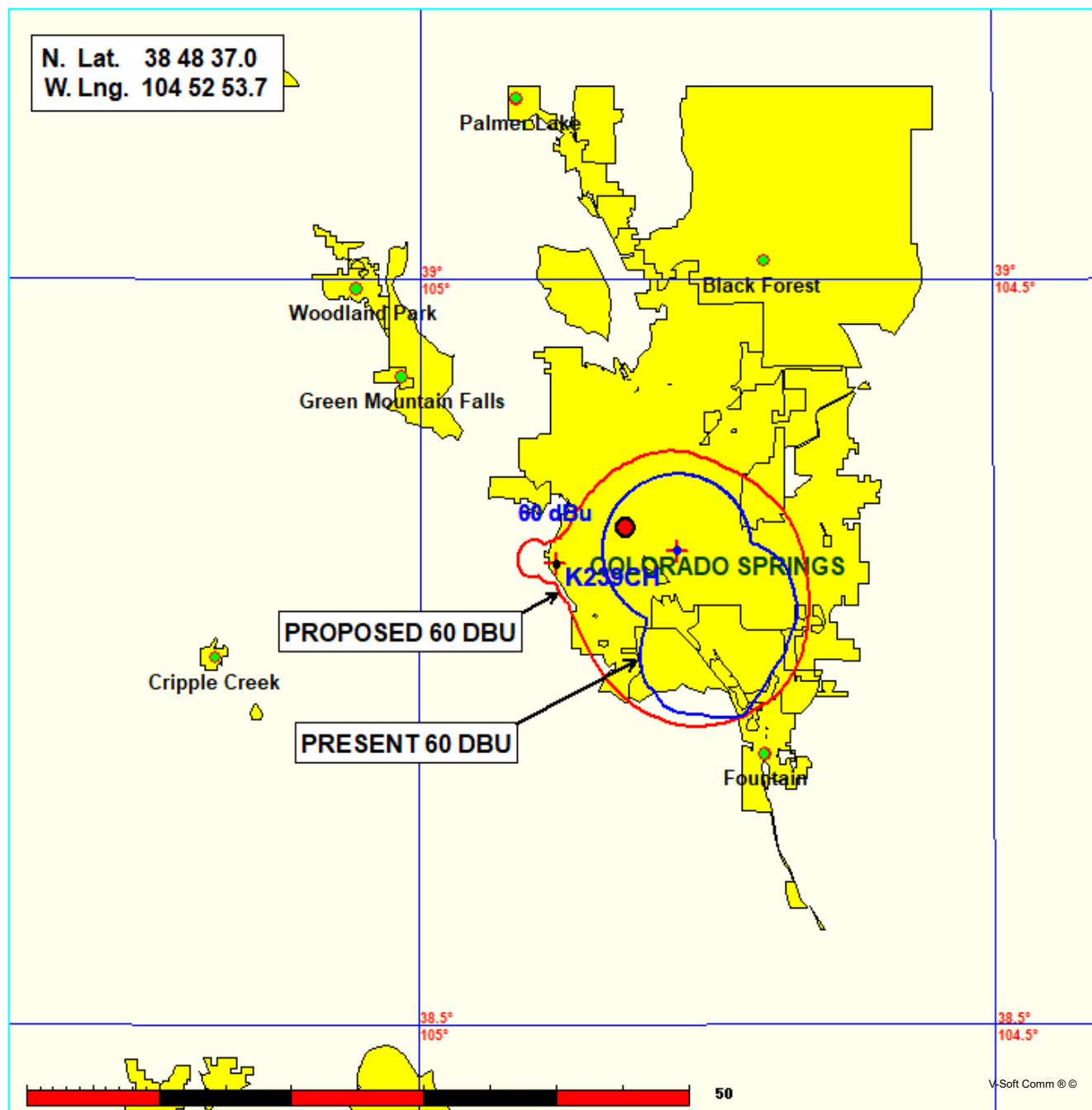


FIGURE 7 - FILL-IN MAP WITH KCBR(AM)
K239CH COLORADO SPRINGS, CO, CH. 239D

Coverage Study - NGDC 30 SEC
04-22-2018

K239CH CH239 D , 0.099 kW, -149.5m HAAT, 2178.0m COR AMSL
Service Contour = 60 dBu. Population = 250,874

