

TECHNICAL STATEMENT  
K280EQ GREELEY, COLORADO  
CEDAR COVE BROADCASTING, INC.  
FCC FORM 349  
FEBRUARY 2015

This Technical Statement is made in support of a minor change application for FM translator station, K280EQ at Fort Morgan, Colorado, facility ID 151241. K280EQ seeks to relocate its current authorization by less than 250 miles and become a fill-in translator for KGRE(AM) Greeley, Colorado, facility ID 33821. This proposed move is in response to the Commissions AM Revitalization Report and Order. The following will show that the new proposed operation of K280EQ will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K280EQ specifies a maximum Effective Radiated Power of 0.001 kilowatts. It will operate with a non-directional antenna with an “off the shelf” type antenna, or a Nicom BKG77, circular polarized one bay type antenna. The antenna will be mounted on an existing tower with an over height of 24 meters above the ground. The antenna will be mounted with a Center of Radiation of 24 meters above the ground, and 1443 meters Above Mean Sea Level. The coordinates of this tower are located at N 40° 25’ 28”, W 104° 41’ 24”. The tower is mounted on the rooftop of a three story office building, which is the main studio location for KGRE(AM). The actual tower is 12.2 meters (40 feet) in overall height. The tower is used by KGRE(AM) for receive antennas and an aural STL system.

Figure 1 is a detailed interference study conducted on channel 276D with these new proposed facilities. It shows that the new operation of K280EQ will not cause any

interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 276, with the exception of 3rd adjacent channel station KTRR, Loveland, Colorado operating on channel 273C2, facility ID 50375.

The proposed operation of K280EQ on 276D is located within the protected 60 dB $\mu$  contour of 3rd adjacent channel of KTRR on channel 273C2. Figure 2 shows the predicted F(50-50) field strength of KTRR at the proposed K280EQ transmitter site is 75.0 dB $\mu$ . Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K280EQ on channel 276D is an additional 40 dB $\mu$  or 115.0 dB $\mu$ .

Figure 3 shows the coverage area for the 115.0 dB $\mu$  interference contour F(50-10) and shows that there is no population in the area of interference. The 115.0 dB $\mu$  interference contour would only extend 12 meters. It will not reach the ground at any point since the antenna will be mounted 12.2 meters above the rooftop of the office building where the tower is located. The applicant, Cedar Cove Broadcasting, Inc., 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. The rooftop access to the studio building is locked and not open to the general public, only occasional mechanical service personnel have access. The tower is side mounted on a mechanical room that is also not open to the public and not regularly occupied. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K280EQ until such interference can be eliminated.

The proposed operation of K280EQ Greeley will be considered a "Fill-In" operation for KGRE(AM) Greeley, Colorado. KGRE(AM) operates with 1 kilowatt daytime with a non-direction antenna system on 1450 kHz. Figure 4 shows that the

proposed 60 dB $\mu$  contour for the proposed K280EQ will extend beyond the daytime 2.0 mV/m contour of KGRE. It will also not extend beyond a 25 miles radius from the KGRE tower site. Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K280EQ Greeley, Colorado on channel 276D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY, CH 276D

K280EQ Greeley, Colorado											
REFERENCE		CH# 276D - 103.1 MHz, Pwr= 0.001 kW, HAAT= -0.4 M, COR= 1443 M							DISPLAY DATES		
40 25 28.0 N.		Average Protected F(50-50)= 1.82 km							DATA 02-24-16		
104 41 24.0 W.		Omni-directional							SEARCH 02-24-16		
CH CITY	CALL	TYPE ANT STATE	AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
276D Greeley	K280EQ	APP DC_ CO	297.0 117.0	3.19 BPFT20160129AYN	40 26 15.0 104 43 25.0	0.250 1517	45.7	13.3 Cedar Cove Broadcasting, I	-45.3*	-15.8*	
275C1 Laramie	KARS-FM	LIC _C_ WY	301.0 120.3	98.78 BLH20051031AB0	40 52 37.0 105 41 44.0	100.000 248	128.1 2999	85.9 The Fort Collins/Lafayette	-31.1*	10.1	
273C2 Loveland	KTRR	LIC NCX CO	336.0 155.9	26.45 BLH20051107AEI	40 38 31.0 104 49 03.0	17.000 234	5.9 1793	54.2 Townsquare Media Of Ft. Co	18.7	-27.8*	
276C3 Weldona	KFWA	LIC _C_ CO	106.8 287.3	67.99 BMLED20150915AGB	40 14 44.0 103 55 29.3	6.800 46	76.0 1403	19.1 Way Media, Inc.	-10.2*	41.4	
275D Fort Collins	KARS-FM1	LIC DC_ CO	325.8 145.5	67.79 BLFTB20070718AEG	40 55 41.0 105 08 36.0	17.000 140	70.0 2100	46.6 The Fort Collins/Lafayette	-3.9*	17.7	
276D Denver	K276FK	LIC _C_ CO	211.2 30.8	90.14 BLFT20130402ACK	39 43 45.0 105 14 08.0	0.250 226	86.6 2254	29.3 Entercom Denver Li License	1.8	54.8	
278C0 Denver	KRFX	LIC DCX CO	211.3 31.0	89.79 BLH20070927AIC	39 43 59.0 105 14 10.0	100.000 346	12.6 2256	87.0 Citicasters Licenses, Inc.	75.4	2.7	
277C2 Warren Afb	KRAN	LIC ZCX WY	358.1 178.1	81.66 BLH20090624AEP	41 09 34.0 104 43 19.0	37.000 78	47.4 1912	29.7 Freisland Broadcasting Cor	32.4	46.1	
274D Berthoud	K274BW	LIC DC_ CO	222.8 42.5	62.39 BLFT20090623ACK	40 00 43.0 105 11 16.0	0.250 -16	0.6 1673	10.8 Community Radio For North	59.9	51.5	
279C1 Akron	AU9861841	VAC ____ CO	105.0 286.1	152.76 RM10630	40 03 28.0 102 57 35.0	100.000 299	9.7 1637	70.2 Akron B/c Co.	140.8	82.3	
279C1 Akron	1686228	APP ____ CO	105.0 286.1	152.76 BSFH20150528AHX	40 03 28.0 102 57 35.0	100.000 299	9.7 1637	70.2 Northeast Colorado Broadca	140.8	82.3	
274C Manitou Springs	KBIO	LIC _C_ CO	184.5 4.4	187.00 BMLH20030423AAT	38 44 43.0 104 51 39.0	72.000 695	15.9 2946	102.7 Bison Media, Inc.	169.3	84.3	
279C1 Eckley	1695115	RSV-A ____ CO	103.9 285.2	177.89	40 01 28.0 102 39 58.0	100.000 299	9.6 1551	70.1 Northeast Colorado Broadca	166.0	107.5	
277C3 Yampa	1713857	RSV-A ____ CO	265.8 84.3	197.85	40 16 20.0 107 00 37.0	25.000 100	71.8 2521	48.3 Educational Media Foundati	124.4	143.6	
276C3 Aspen	AL3178	RSV-A ____ CO	234.6 53.3	226.67 RM9890	39 13 33.0 106 50 00.0	25.000 100	99.8 2951	22.7 East Indian Music Academy	125.0	193.7	
276L1 Monument	KJOY-LP	LIC ____ CO	186.1 5.9	147.86 BLL20150804ABP	39 06 00.0 104 52 16.1	0.100	2183	126.5 East Indian Music Academy		135.7	
276C1 Colorado City	KIQN	CP _CX CO	177.3 357.4	293.75 BPH20140805ADA	37 46 52.0 104 32 03.0	100.000 165	165.4 1958	66.7 Pueblo Broadcasting Group	126.6	221.5	
276L1 Monument	KJOY-LP	CP ____ CO	185.1 5.0	152.25 BPL20160128BDS	39 03 31.0 104 50 54.1	0.100 -187	2103	131.9 East Indian Music Academy		141.0	
279C1 Eckley	1694997	APP _CX CO	103.9 285.2	177.89 BNPH20151013ADX	40 01 28.0 102 39 58.0	52.000 80	3.6 1332	34.6 Northeast Colorado Broadca	172.1	141.5	
273C2 Gypsum	KQSE	LIC _C_ CO	247.7 66.3	195.38 BLH20110506AAP	39 44 18.0 106 47 58.0	1.350 660	2.5 3161	48.3 Alwaysmountaintime, LIC	191.1	143.8	
277C3 Yampa	1713698	APP NCX CO	266.5 85.0	194.60 BNPH20151013AGJ	40 17 42.1 106 58 28.8	8.500 170	45.0 2536	28.8 Educational Media Foundati	147.8	149.5	
277L1 Falcon	KHYR-LP	LIC ____ CO	177.0 357.0	173.14 BLL20150728ADB	38 52 01.7 104 35 01.9	0.006 124	2079	167.4 Iron Horse Christian Youth		167.4	
277L1 Falcon	KHYR-LP	APP ____ CO	180.9 0.9	180.83 BPL20160128BFF	38 47 45.0 104 43 20.1	0.100 -16	1853	171.0 Iron Horse Christian Youth		172.7	
276A Aspen	KSPN-FM	LIC _C_ CO	234.6 53.3	226.67 BMLH20010913AAJ	39 13 33.0 106 50 00.0	3.000 -26	53.3 2876	13.2 Alwaysmountaintime, LIC	171.6	206.6	
275C1 Imperial	KADL	CP DCX NE	86.8 268.8	258.50 BPH20130524BAK	40 30 45.0 101 38 39.0	100.000 62	66.5 1062	36.7 Armada Media - Mccook, Inc	189.8	217.3	

CH CI TY	CALL	TYPE STATE	ANT	AZI <--	DI ST FI LE #	LAT LNG	PWR(kW) HAAT (M)	INT(km) COR (M)	PRO(km) LI CENSEE	Page # 2 *IN* (Overlap in km)	
										*OUT*	
277C1	KIQN Colorado Ci ty	LIC _CX CO		177.3 357.4	293.75 BLH20110418ABT	37 46 52.0 104 32 03.0	100.000 165	98.2 1958	66.7 Puebl o	193.7 Broadcasting Group	224.6
277A	1686193 Baggs	APP _ WY		286.2 104.3	259.67 BSFH20150723ACK	41 02 12.0 107 39 24.0	6.000 100	43.6 2087	28.2 Educational Media Foundati	214.3	225.8
277A	AU9829895 Baggs	VAC _N WY		286.2 104.3	259.67 RM9279	41 02 12.0 107 39 24.0	6.000 100	43.6 2087	28.2 Mountain Tower Broadcastin	214.3	225.8
279C	KQLT Casper	LIC _CY WY		333.0 151.9	290.79 BLH19980114KB	42 44 37.0 106 18 31.0	100.000 567	8.1 2525	63.4 Mt. Rushmore Broadcasting,	280.9	221.6
273C	KHOC Casper	LIC _C_ WY		333.0 151.9	290.79 BLH20000407ADB	42 44 37.0 106 18 31.0	100.000 517	7.0 2475	57.9 Mt. Rushmore Broadcasting,	282.0	224.2
273C1	KKCI Goodl and	LIC _C_ KS		112.3 294.3	291.27 BLH20000425AAL	39 23 24.0 101 33 35.0	100.000 216	8.3 1296	64.2 Mel ia Communi cations, Inc	280.7	226.6
277D	KIQN-FM2 Puebl o West	CP DH_ CO		181.0 0.9	231.50 BNPFTB20130308AAB	38 20 22.4 104 44 07.3	7.000 1569	2.4 1569	1.7 Puebl o Broadcasting Group	227.3	226.9
275A	KADL Imperial	LIC _CX NE		86.8 268.8	258.50 BLH20040518ABF	40 30 45.0 101 38 39.0	0.300 68	13.4 1067	9.6 Armada Media - Mccook, Inc	242.9	245.6
275C3	KJXR Battlement Mesa	LIC DHX CO		249.8 67.7	302.11 BLH20130815ABB	39 26 25.0 107 59 06.0	6.100 -226	48.4 1977	31.4 Cochi se Media Li censes, LI	252.0	258.6
278C1	KXNP North Platte	LIC _CN NE		74.0 256.5	345.39 BLH19820701AQ	41 12 49.0 100 43 48.0	100.000 146	7.6 1038	61.2 Armada Media - Mccook, Inc	335.7	284.0
279C2	KSNM Ri dgway	LIC _CX CO		229.5 47.6	342.42 BLH20030521ABD	38 23 15.0 107 40 31.0	4.100 480	3.8 2860	47.0 Ccr-montrose Iv, LI c	336.8	290.2
278C3	KPAU Center	CP _CX CO		209.3 28.1	341.28 BPH20130524ADT	37 43 47.0 106 35 18.0	0.880 504	2.0 3365	38.9 Cochi se Media Li censes LI c	337.5	300.6
278A	KPAU Center	LIC _HX CO		203.2 22.3	317.38 BLH20090507AB0	37 47 20.0 106 06 43.0	0.460 8	1.5 2332	8.3 Cochi se Media Li censes LI c	314.1	309.0
277C2	KPRU Del ta	LIC _C_ CO		241.5 59.3	348.67 BLED20010411AAF	38 52 40.0 108 13 32.0	12.000 301	28.2 2316	19.0 Public Broadcasting Of Col	318.7	314.4
273A	KCDC Loma	CP _CX CO		247.8 65.2	378.76 BPH20090205ACK	39 04 01.0 108 44 39.0	0.400 383	1.4 2175	40.8 Cochi se Media Li censes LI c	375.5	337.8

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. 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 cause to KTRR since the 115 dbu interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - KTRR 75.0 DBU CONTOUR AT SITE  
K280EQ Greeley, Colorado

Coverage Study - NGDC 30 SEC  
02-24-2016

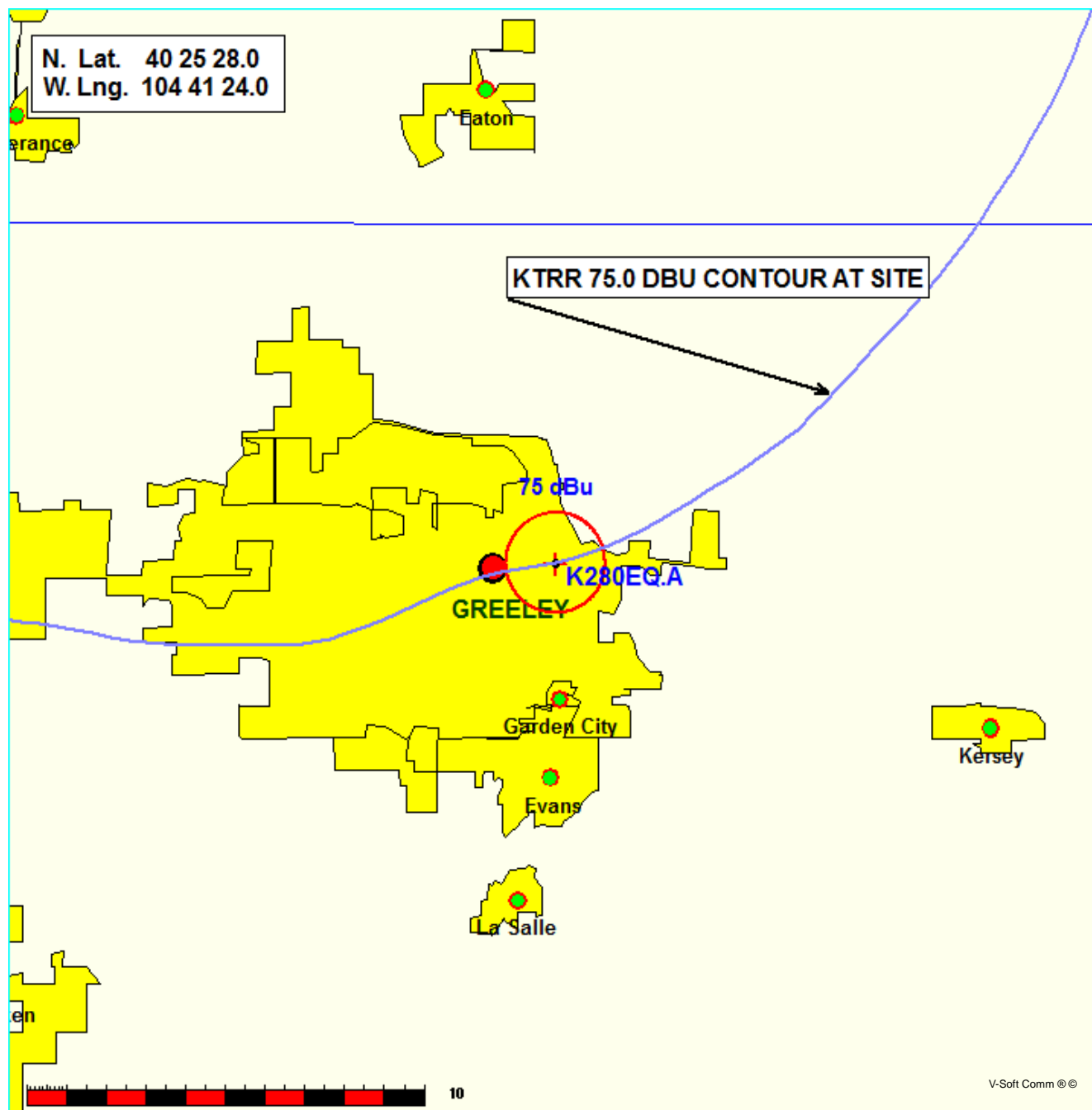
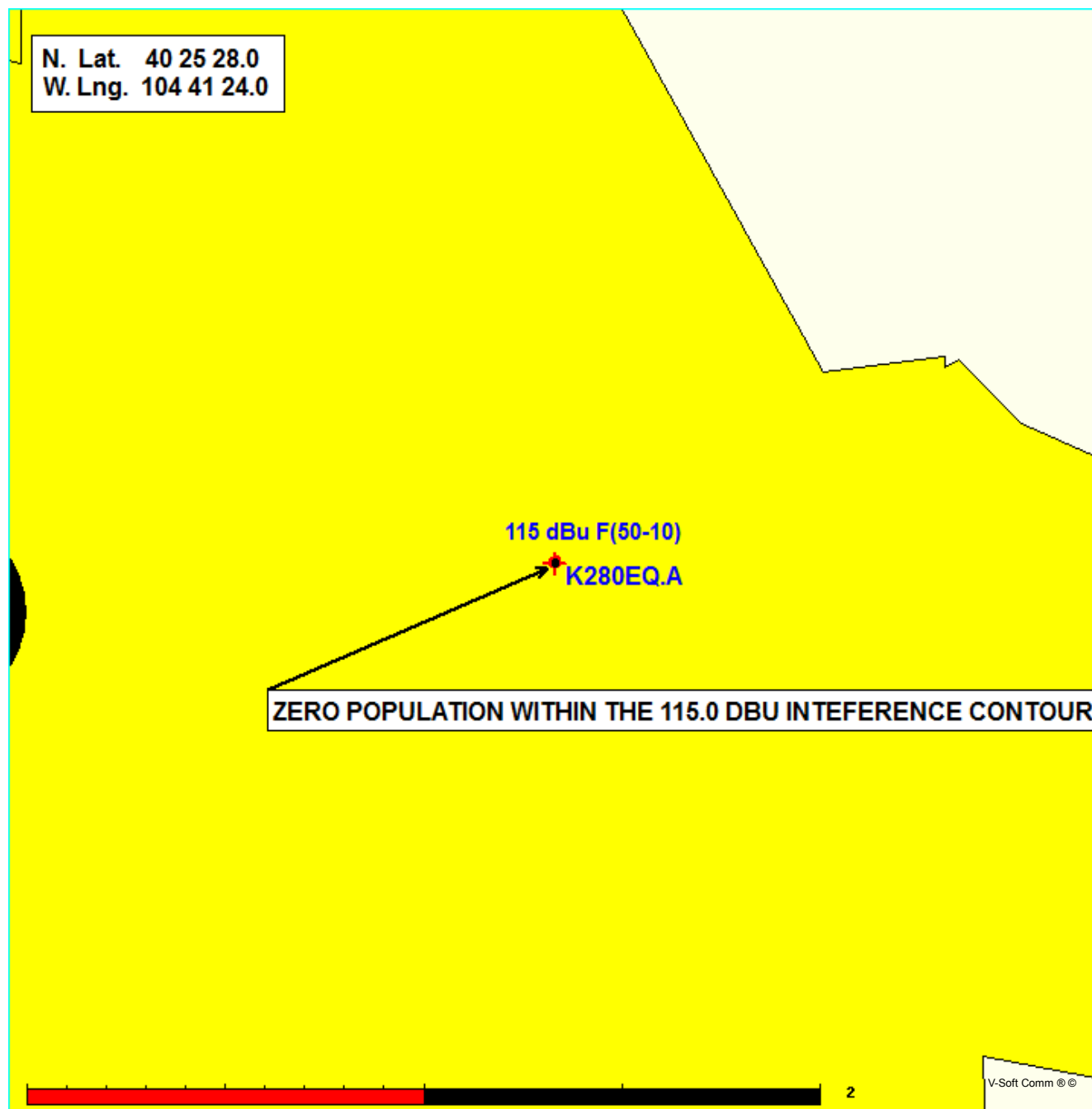


FIGURE 3 - PREDICTED 115.0 INTERFERENCE CONTOUR  
K280EQ Greeley, Colorado

Coverage Study - NGDC 30 SEC  
02-24-2016

K280EQ CH276 D , 0.001 kW, -0.4m HAAT, 1443.0m COR AMSL  
Interference Contour = 115 dBu. Population = 0



**K280EQ**

BPFT20160129AYN

Latitude: 40-25-28 N

Longitude: 104-41-24 W

ERP: 0.001 kW

Channel: 276

Frequency: 103.1 MHz

AMSL Height: 1443.0 m

Elevation: 1419.0 m

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model:

**FIGURE 4 - FILL-IN MAP**