

TECHNICAL STATEMENT  
K268CK GOLDEN, CO  
MARY MEDICUS  
FCC FORM 349  
DECEMBER 2015

This Technical Statement is in support of a minor change application, FCC form 349, being filed on behalf of Mary Medicus (“MM”) in regards to its FM translator, K268CK Golden, Colorado, facility ID 147935. K268CK seeks to modify its current operation on channel 268D to its I.F. spaced channel 214D (54 channels). It also seeks to relocate to a new existing tower site located on north Table Mountain near Golden, Colorado and increase its ERP to 14 watts and make changes to its present antenna system.

MM is proposing to relocate to an existing site located at N. 39° 47’ 05”, W. 105° 12’ 56”, NAD 27, with an increased Effective Radiated Power of 14 Watts and replace the current Scala CA-5 antenna with a new Nicom BKG-1, composite pattern yagi type directional antenna system. The antenna will be mounted at the 20 meter level on a 37 meter overall tower, with a Center of Radiation at 2004 meters Above Mean Sea Level.

Figure 1 shows a detailed channel interference study conducted from the proposed site for K268CK. It shows that the proposed operation of K268CK on channel 214D will not cause any prohibited outgoing interference to any licensed or proposed FM services, with the exception of KCFR-FM Denver, Colorado operating on channel 211C1, facility ID 53777 and KLDV(FM) Morrison, Colorado on channel 216C0, facility ID 12354 . The proposed operation of K268CK on 214D is located within the protected 60 dBμ contour of 2nd adjacent station KLDV and 3<sup>rd</sup> adjacent channel KCFR-FM.

The “worst case” interference contour would be 100 dB $\mu$  towards any 2<sup>nd</sup> or 3<sup>rd</sup> adjacent channel station. Figure 2 documents that there is no population within the proposed predicted 100 dB $\mu$  interference contour for K268CK on channel 214D. The licensee, Mary Medicus, 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 2 acre square remote mountain area with private access. The transmitter building is uninhabited and does not have indoor plumbing.

Figure 3 shows the proposed directional antenna pattern for use by K268CK on channel 214D.

Figure 4 shows the present and proposed 60 dB $\mu$  (F50,50) contours for K268CK which documents that the present 60 dB $\mu$  contour and proposed 60 dB $\mu$  contour will overlap with each other as required.

It was concluded that the new proposed operation of K268CK Golden, Colorado on channel 214D will not cause any harmful interference to any existing stations, and will be in full compliance with the commission’s rules.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K268CK GOLDEN, COLORADO, CH. 214D CH# 214D - 90.7 MHz, Pwr= 0.014 kW DA, HAAT= 54.0 M, COR= 2004 M Average Protected F(50-50)= 4.67 km Standard Directional										
DISPLAY DATES DATA 12-18-15 SEARCH 12-20-15										
CH CITY	CALL	TYPE ANT STATE	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
211C1 Denver	KCFR-FM	LIC _CY CO	205.8 25.7	6.71 BLED19851115KB	39 43 49.0 105 14 59.0	50.000 277	10.5 2333	81.8 Public Broadcasting Of Col	-6.3*	-75.2*
211C1 Denver	KCFR-FM	APP DCY CO	180.7 0.7	12.35 BPED20151026ABG	39 40 24.4 105 13 02.5	68.300 326	10.1 2364	79.0 Public Broadcasting Of Col	-2.4	-66.7*
216C0 Morri son	KLDV	LIC _CX CO	178.6 358.6	20.51 BLED20060803A0Y	39 36 00.0 105 12 35.0	100.000 356	12.2 2448	83.8 Educational Media Foundati	3.2	-63.3*
06 T Denver	KXDP-LP	CP D_N CO	335.4 155.3	15.72 BDFCDVL20141003ACE	39 54 48.0 105 17 33.0	3.000 879	1.6 2536	50.9 52.5R	52.5R	-36.8M
06NT Denver	KXDP-LP	LI D_N CO	335.4 155.3	15.72 BLTVL20100716ABT	39 54 48.0 105 17 33.0	3.000 879	1.6 2536	50.9 52.5R	52.5R	-36.8M
214A Longmont	KGUD	CP DCX CO	15.0 195.1	52.37 BPED20141216AAD	40 14 24.0 105 03 19.0	1.000 82	57.1 1613	17.1 Longmont Community Radio	-15.1*	0.1
213C0 Colorado Springs	KTLE	LIC _VX CO	165.1 345.3	119.38 BLED20040225AAB	38 44 43.0 104 51 39.0	20.000 673	123.6 2923	83.8 Educational Communications	-9.8*	29.5
213D Littleton	K213EG	LIC DE_ CO	195.6 15.5	6.37 BLFT20060602AAN	39 43 46.0 105 14 08.0	0.003 213	6.3 2241	0.8 Educational Communications	0.2	0.2
214A Longmont	KGUD	LIC _CN CO	15.0 195.1	52.37 BLED19821018AU	40 14 24.0 105 03 19.0	0.100 82	31.7 1613	9.6 Longmont Community Radio	10.3	9.2
214A Estes Park	KENC	LIC DEX CO	338.1 157.9	69.01 BMLED20130109AGF	40 21 38.0 105 31 12.0	0.200 13	23.8 2730	6.4 Community Radio For Northe	37.3	39.1
214A Breckenridge	KMPB	LIC _CX CO	245.5 65.0	76.84 BLED20130930BUD	39 29 44.0 106 01 44.0	0.600 -76	30.1 3246	8.9 Community Radio For Northe	45.1	53.9
213C3 Fort Collins	KCSU-FM	LIC _CN CO	3.2 183.2	90.66 BLED19850124LR	40 36 00.0 105 09 21.0	10.000 -108	26.8 1613	18.1 Board Of Governors Of The	54.1	56.3
215D Dillon	K215BZ	LIC _VN CO	255.7 75.1	75.46 BLFT19970121TD	39 36 50.0 106 04 02.0	0.082 -285	7.6 2864	5.4 Educational Media Foundati	66.0	68.0
217D Frisco	K217FS	LIC _C_ CO	245.5 65.0	76.78 BLFT20081208AFL	39 29 47.0 106 01 43.0	0.023 -54	0.3 3227	3.9 Educational Communications	74.8	68.4
211D Breckenridge	K264AG	CP DC_ CO	245.5 65.0	76.80 BPFT20150120AHF	39 29 47.0 106 01 44.0	0.023	0.2 3236	2.9 Mountain Community Transla	75.0	70.8
215C0 Chugwater	KLWV	LIC _CX WY	353.3 173.2	170.65 BLED20040621ABR	41 18 39.0 105 27 12.0	100.000 361	89.8 2765	59.5 Educational Media Foundati	71.9	97.3
215A Minturn	KVNC	LIC _CX CO	260.3 79.5	107.47 BLED20130927ATU	39 36 58.0 106 26 58.0	0.100 -211	8.0 2726	5.6 Community Radio For Northe	97.5	99.7
215A Leadville	KTOL	LIC _C_ CO	237.0 56.3	111.45 BLED20080606AAR	39 14 05.0 106 17 59.0	0.450 -207	11.7 3083	8.3 Educational Communications	98.2	101.2
211D Manitou Springs	K211AW	LIC _HN CO	165.2 345.4	105.69 BLFT19850225TD	38 51 50.0 104 54 15.0	0.086 -694	0.7 1984	5.4 The Colorado College	99.4	100.2
212D Vail, Etc.	K212FY	LIC DV_ CO	260.3 79.5	107.44 BLFT20100312AAT	39 36 58.0 106 26 57.0	0.250 -222	1.0 2731	6.5 Educational Media Foundati	104.5	100.6
06NT Manitou Springs	K06BI	LI DHN CO	165.2 345.4	105.69 BLTTV1446	38 51 50.0 104 54 15.0	0.001 188	0.6 2012	0.1 0.8R	0.8R	104.9M
217C3 Gypsum	KLRY	LIC _CX CO	270.1 89.0	139.66 BLED20051109AAM	39 46 30.0 106 50 45.0	0.110 859	0.7 3361	28.4 Educational Media Foundati	136.7	109.2
213A Brush	KBEI	LIC _CX CO	67.3 248.4	144.88 BLED20120221ABO	40 16 30.0 103 38 33.0	1.000 56	21.3 1370	14.2 Educational Communications	112.4	114.3
217C2 Salida	KTPF	LIC _C_ CO	205.0 24.5	163.66 BLED20070817ACM	38 26 48.0 106 00 36.0	0.390 900	1.4 3567	48.7 Educational Communications	159.9	114.2
213C2 Carbondale	KVOV	LIC DCX CO	258.3 76.9	189.40 BLED20040913AAA	39 25 08.0 107 22 10.0	0.450 775	71.7 3227	48.2 Public Broadcasting Of Col	115.8	138.0

CH CITY	CALL	TYPE STATE	ANT	AZI ---	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	Page # 2	
										*IN*	*OUT*
(Overlap in km)											
214A Sterling	KDRE	LIC_VX CO		62.8 244.2	207.40 BLED20051006AAI	40 36 56.0 103 02 02.0	1.600 154	78.0 1447	26.6 Educational Media Foundati	118.3	142.9
211C2 Hayden	KHCO	LIC_VX CO		300.1 119.1	150.41 BLED20091125AGK	40 27 04.0 106 45 06.0	1.800 522	2.5 3140	31.5 Educational Media Foundati	143.0	118.7
215C3 Rye	KRWA	LIC_CX CO		174.7 354.8	205.15 BLED20110307ABR	37 56 40.0 104 59 56.0	10.000 35	78.8 2577	52.1 Way Media, Inc.	121.8	145.0
212C2 Cheyenne	KWYC	LIC_CX WY		21.9 202.4	171.83 BLED20100511ABH	41 13 01.0 104 26 53.0	20.500 130	4.1 1848	39.8 Calvary Chapel Of Twin Fal	157.0	131.7
217C3 Brush	KLZV	LIC_CX CO		75.6 256.8	169.87 BLED20070927AIN	40 08 56.0 103 17 04.0	6.000 129	3.1 1526	32.7 Educational Media Foundati	155.5	136.4
211A Laramie	KUWL	LIC_CX WY		353.3 173.1	170.57 BLED20080303AI Z	41 18 36.0 105 27 17.0	0.110 295	0.7 2699	10.1 Uni versi ty Of Wyomi ng	160.7	155.4
212A Crested Butte	KBUT	LIC_CX CO		237.5 56.4	180.40 BLED20140917ACR	38 54 07.0 106 58 21.0	1.000 -208	1.6 2969	10.2 Crested Butte Mountain Edu	177.2	170.2
214C3 Lingle	KUWV	LIC_CX WY		16.9 197.6	296.55 BLED20110316AAQ	42 20 02.8 104 09 56.2	14.000 96	100.4 1510	33.8 Uni versi ty Of Wyomi ng	185.7	227.0
215A Paonia	KVNF	LIC_CX CO		245.1 63.5	233.83 BLED20050826AAJ	38 52 28.0 107 39 40.0	2.600 -22	45.9 2120	29.4 North Fork Valley Public R	187.3	197.6
216A Gunnison	KWSB-FM	LIC_CN CO		226.7 45.6	202.54 BLED19850430LR	38 31 22.0 106 54 28.0	0.135 91	0.8 2627	6.1 Western State College Of C	200.1	189.9
215A Rifle	KRJX	LIC_CX CO		261.7 80.0	239.31 BLED20120507AAJ	39 26 33.0 107 58 01.0	3.000 3	45.7 2242	27.9 Educational Communi cations	192.6	191.3
214A Lamar	KCSE	LIC_NCX CO		129.8 311.5	298.61 BLED20140929AIN	38 02 10.0 102 35 58.0	4.000 113	86.3 1259	29.6 Kanza Soci ety, Inc.	203.6	244.9
216C Al liance	KTNE-FM	LIC_CY NE		37.8 219.2	292.10 BLED19900515KB	41 50 24.0 103 03 18.0	100.000 404	12.3 1669	84.8 Nebraska Educational Telec	268.7	207.0
214A Tri ni dad	KTDL	LIC_CX CO		168.0 348.5	316.65 BLED20071115AAB	36 59 33.0 104 28 24.0	0.450 296	85.3 2610	30.2 Educational Communi cations	226.0	272.9
214A Placerville	KLMQ	LIC_HX CO		231.0 49.3	311.19 BLED20151105AHD	37 59 30.0 107 58 21.0	0.250 449	68.2 3359	22.4 Educational Media Foundati	241.7	280.1
212A Wray	KGCD	LIC_VX CO		82.4 264.3	257.37 BLED20110408ACX	40 03 13.0 102 13 32.0	0.430 77	1.5 1211	11.7 The Praise Network, Inc.	244.7	244.8
215A Alamosa	KASF	LIC_C_ CO		192.8 12.4	263.09 BLED20010419AAA	37 28 20.0 105 52 39.0	1.100 27	14.5 2316	10.4 Adams State College	245.5	250.7
217C2 Grand Junction	KMSA	LIC_CX CO		256.4 74.1	314.45 BLED20130305ABT	39 03 56.0 108 44 52.0	3.100 407	3.6 2204	60.7 Colorado Mesa Uni versi ty	308.9	253.4
212C2 Grand Junction	KLFV	LIC_CX CO		256.4 74.1	314.35 BLED20031118AAP	39 03 57.0 108 44 48.0	3.000 399	3.6 2196	60.2 Educational Media Foundati	308.9	253.9
211C1 Brewster	KZNK	LIC_CX KS		99.1 281.6	336.95 BLED20101027AAH	39 14 31.0 101 21 38.0	90.000 305	9.4 1343	69.0 Kanza Soci ety, Inc.	316.9	267.6
217A Sanford	KASV	CP_HX CO		192.2 11.7	285.78 BPED20141104AEB	37 15 59.0 105 53 47.0	2.500 7	1.7 2339	16.8 Top O Texas Educational Br	280.9	268.9
212C Casper	KCSP-FM	LIC_CX WY		344.9 164.1	340.69 BLED20140923ABP	42 44 24.0 106 18 23.0	100.000 593	9.1 2554	67.6 Western Inspirational Broa	323.0	272.8
211C1 Red River	KCEI	CP_DCX NM		192.4 11.9	332.18 BPED20130424ABT	36 51 34.0 106 01 02.0	2.050 739	3.0 3335	58.3 Cul tural Energy	326.0	273.8
211C3 Red River	KCEI	LIC_VX NM		185.1 4.9	344.81 BLED20011228AAP	36 41 25.0 105 33 43.0	3.200 219	3.0 2922	37.1 Cul tural Energy	338.0	294.3
217C3 Red River	KASV	LIC_CX NM		183.1 3.0	339.68 BLED20100924ADI	36 43 44.0 105 25 29.0	2.000 273	2.4 3308	27.9 Top O Texas Educational Br	333.2	304.0
217C3 Casper	KUWC	LIC_C_ WY		344.2 163.4	341.97 BLED20000707ACY	42 44 26.0 106 21 34.0	0.530 544	1.6 2482	24.4 Uni versi ty Of Wyomi ng	331.8	309.9
217C2 Ignacio	KSUT	LIC_CX CO		215.0 33.6	350.05 BLED20100713AGQ	37 11 03.0 107 29 06.0	2.000 497	2.6 2713	33.2 Kute, Inc.	345.4	312.0
211C1 Ignacio	KUTE	LIC_DVN CO		220.5 38.9	349.60 BLED19980717KA	37 21 51.0 107 46 56.0	3.000 599	2.3 3029	24.1 Kute, Inc.	345.5	316.3

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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*
213A Dulce	KCIE	LIC DEN NM		206.7 25.6	346.69 BLED19901001KA	36 59 00.0 106 58 12.0	0.100 468	19.4 2757	12.9 Jicarilla Apache Tribe	325.0	328.3

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 3rd adjacent channel station KCFR-FM Denver, Colorado on channel 211C1 and 2nd adjacent channel station KLDV(FM) Morrison, Colorado on channel 216D since the proposed 100 DBU interference contour will not cover any population.  
A consent letter has been obtained from TV channel six station KXDP-LP Denver, Colorado.  
See the Technical Statement for more details.

FIGURE 2 - PREDICTED 100 DBU INTERFERENCE CONTOUR  
K268CK GOLDEN, COLORADO, CH. 214D

Coverage Study - NGDC 30 SEC  
12-20-2015

K268CK CH214 D , 0.014 kW, 54.0m HAAT, 2004.0m COR AMSL  
Interference Contour = 100 dBu. Population = 0

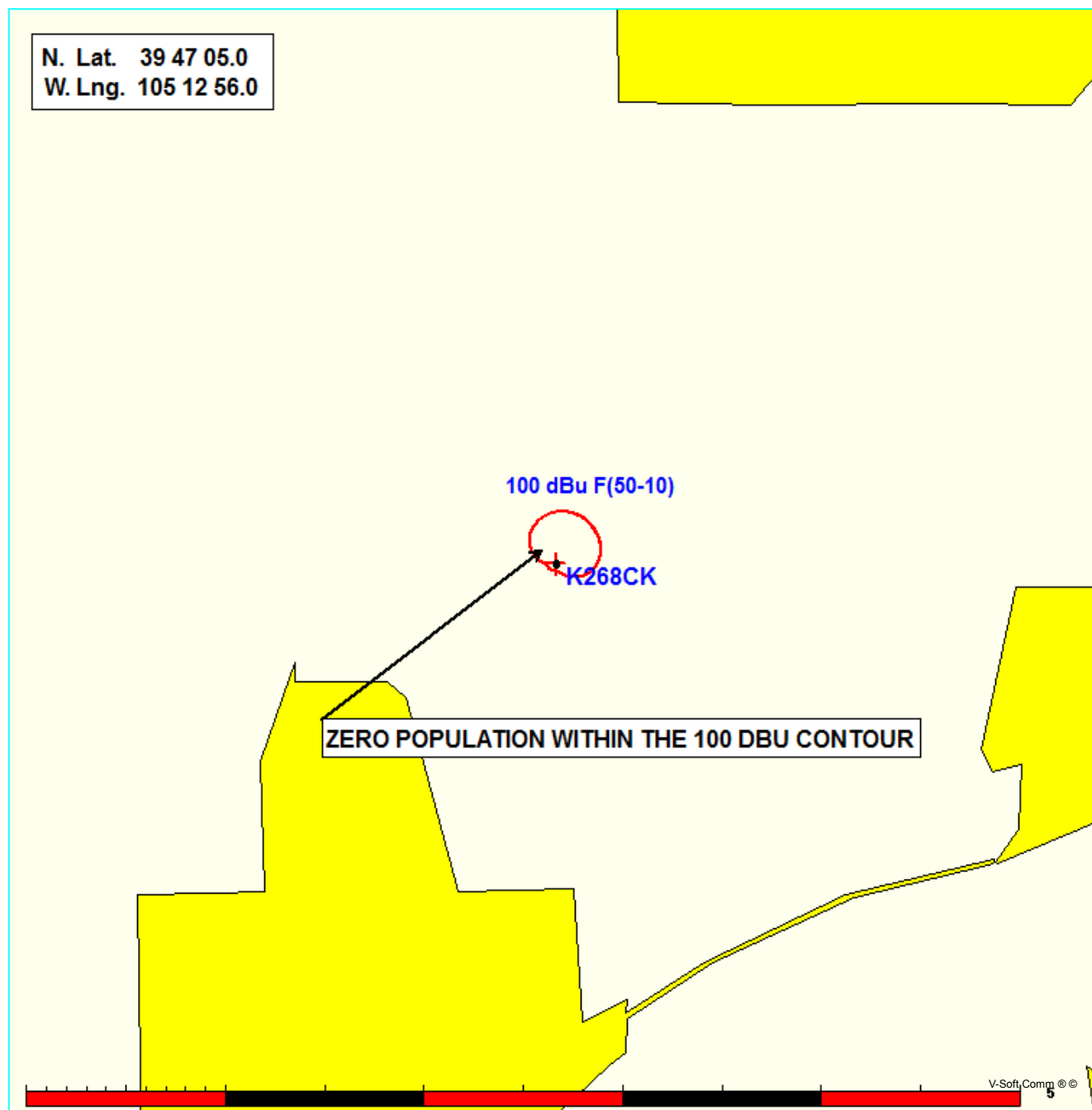


FIGURE 3 - DIRECTIONAL ANTENNA DATA

K268CK NICOM BKG-1/P

12-20-2015

RMS(V) = .64

Graph is Relative Field

Azi	Field	dBk	kW
000	0.956	-18.930	0.013
010	0.978	-18.732	0.013
020	0.990	-18.626	0.014
030	1.000	-18.539	0.014
040	0.990	-18.626	0.014
050	0.978	-18.732	0.013
060	0.956	-18.930	0.013
070	0.927	-19.197	0.012
080	0.882	-19.629	0.011
090	0.808	-20.390	0.009
100	0.733	-21.237	0.008
110	0.646	-22.334	0.006
120	0.543	-23.843	0.004
130	0.430	-25.869	0.003
140	0.324	-28.328	0.001
150	0.240	-30.934	0.001
160	0.183	-33.290	0.000
170	0.158	-34.566	0.000
180	0.163	-34.295	0.000
190	0.157	-34.621	0.000
200	0.165	-34.189	0.000
210	0.161	-34.402	0.000
220	0.165	-34.189	0.000
230	0.157	-34.621	0.000
240	0.163	-34.295	0.000
250	0.158	-34.566	0.000
260	0.183	-33.290	0.000
270	0.240	-30.934	0.001
280	0.324	-28.328	0.001
290	0.430	-25.869	0.003
300	0.543	-23.843	0.004
310	0.646	-22.334	0.006
320	0.733	-21.237	0.008
330	0.808	-20.390	0.009
340	0.882	-19.629	0.011
350	0.927	-19.197	0.012

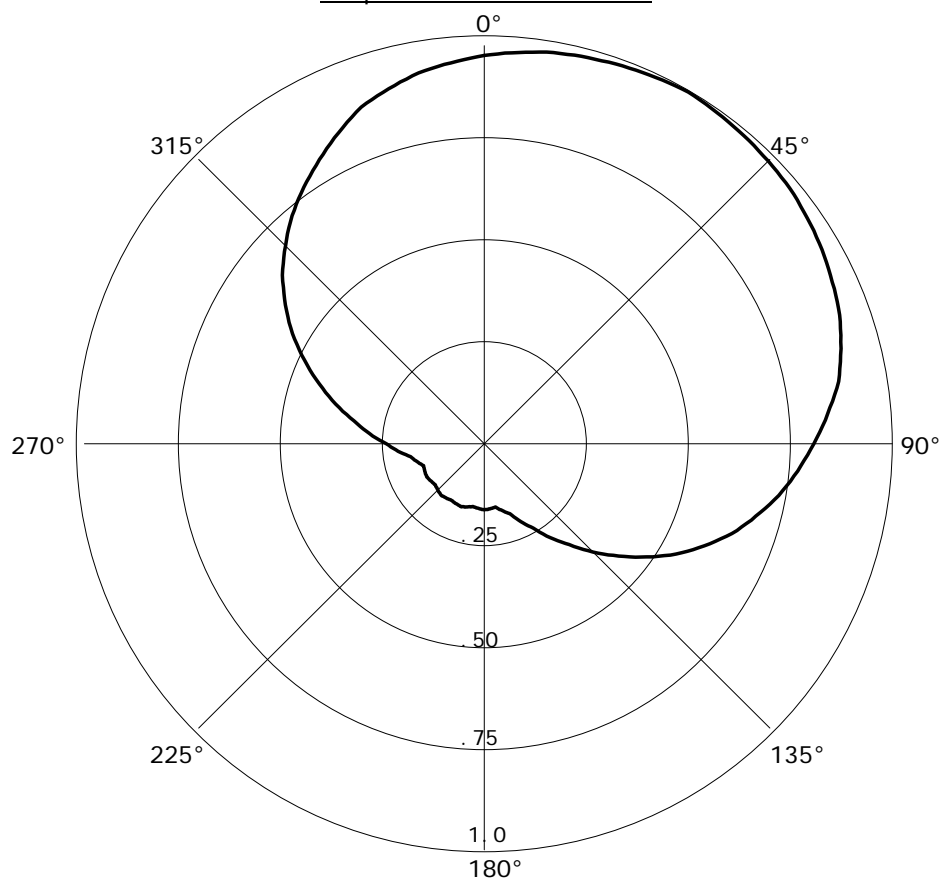


FIGURE 4 - PRESENT AND PROPOSED 60 DBU CONTOURS  
K268CK GOLDEN, COLORADO, CH. 214D

Coverage Study - NGDC 30 SEC  
12-20-2015

