

TECHNICAL STATEMENT  
K243BP CASA GRANDE, ARIZONA, CH. 271D  
MOUNTAIN COMMUNITY TRANSLATORS, LLC  
FCC FORM 349  
MARCH 2018

This Technical Statement is made in support of a modification of FM translator station Construction Permit, BMPFT-20170718AGR for K243BP at Casa Grande, Arizona, facility ID 146671. K243BP seeks to relocate to an adjacent tower site on the same Sacaton Mountain communications site and remain a “fill-in” for KLVA(FM) Maricopa, Arizona, facility ID 2749. K243BP seeks to modify the CP with some minor technical changes in height and directional antenna pattern.

The new proposed operation of K243BP specifies a maximum Effective Radiated Power of 0.25 kilowatts (250 watts). It will operate with a directional antenna with an “off the shelf” type antenna, or a Scala CA-5-CP with dual polarization. The antenna will be mounted on an existing un-registered tower with an overall height of 33 meters above the ground. The antenna will be mounted with a Center of Radiation of 21 meters above the ground, and 850 meters Above Mean Sea Level. The coordinates of this tower are located at N 33° 00’ 11”, W 111° 40’ 26”, NAD 27.

Figure 1 is a detailed interference study conducted on channel 271D with the new proposed facilities. It shows that the new operation of K243BP will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 271 with the exception of third adjacent channel station, KALV-FM Phoenix, Arizona, facility ID 63913, operating on channel 268C and second adjacent channel station, KNIX-FM Phoenix, Arizona, facility ID 7698, channel 273C.

Figure 2 shows the coverage area for the worse case 100.0 dB $\mu$  interference contour F(50-10) and shows that there is no population in the area of interference. 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. The area around the tower base is fenced. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K243BP until such interference can be eliminated.

Figure 3 is the directional antenna data for the proposed antenna system for K243BP.

The proposed operation of K243BP Casa Grande, Arizona will be considered a “Fill-In” operation for KLVA(FM) Maricopa, Arizona. KLVA(FM) operates with 50 kilowatts at 150 meters HAAT on Channel 288C2. Figure 4 shows that the proposed 60 dB $\mu$  contour for the proposed K243BP will not extend beyond the 60 dB $\mu$  contour of KLVA. Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

Figure 5 shows the present and proposed 60 dB $\mu$  contours of K243BN. It shows that there will be overlap between the two facilities as required.

It was found that the new proposed operation of K243BP Casa Grande, Arizona on channel 271D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K243BP CASA GRANDE, AZ, CH 271D

REFERENCE  
33 00 11.0 N.  
111 40 26.0 W.

CH# 271D - 102.1 MHz, Pwr= 0.25 kW DA, HAAT= 401.6 M, COR= 850 M  
Average Protected F(50-50)= 25.89 km  
Standard Directional

DISPLAY DATES  
DATA 03-02-18  
SEARCH 03-02-18

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*
271C1 Oro Valley	KFMA	LIC_ZCX AZ	142.1 322.4	100.20 BLH20050510ABX	32 17 23.0 111 01 06.0	100.000 81	163.0 886	65.0 Arizona	-73.5*	0.7 Lotus Corp.
271D Casa Grande	K243BP	CP_DC_ AZ	147.9 327.9	0.14 BMPFT20170718AGR	33 00 07.0 111 40 23.0	0.250	0.14 777	0.14 Mountain	64.5R	-64.4M Community Transla
268C Phoenix	KALV-FM	LIC_CN AZ	315.3 135.1	51.37 BLH6108	33 19 52.0 112 03 46.0	100.000 530	12.8 889	88.1 Cbs Radio Stations Inc.	19.1	-37.1*
273C Phoenix	KNI X-FM	LIC_CY AZ	315.3 135.1	51.63 BMLH19870814KA	33 19 58.0 112 03 53.0	100.000 494	12.5 853	85.9 Cc Licenses, Lic	19.7	-34.5*
271C Prescott	KAHM	LIC_CY AZ	347.8 167.6	191.24 BLH19960111BK	34 41 14.0 112 07 01.0	58.000 770	184.5 2356	85.9 Phoenix Radio Broadcasting	-17.2	31.8
271C Spring Valley	KAHM	CP_ZCX AZ	335.1 154.7	150.93 BMPH20170815AAS	34 14 03.0 112 22 01.0	25.500 852	131.6 2385	54.4 Phoenix Radio Broadcasting	-2.3	27.8
270D Phoenix	K270BZ	LIC_DC_ AZ	315.8 135.6	51.53 BLFT20170920ABJ	33 20 04.8 112 03 39.5	0.250	34.6 797	22.5 Farmworker Educational Rad	3.0	7.8
218C Phoenix	KJZZ	LIC_CX AZ	315.3 135.1	51.63 BLED20170928ACW	33 19 58.0 112 03 53.0	100.000 490	12.5 856	86.0 Maricopa County Community	28.5R	23.1M
218C Phoenix	KJZZ	LIC_CX AZ	315.3 135.1	51.63 BMLED20090127ACM	33 19 58.0 112 03 53.0	100.000 490	12.5 856	86.0 Maricopa County Community	28.5R	23.1M
270C Sonoma	AL4915	SO	221.4 40.8	168.47	31 51 41.0 112 51 16.0	100.000 600	135.6 1060	92.0	23.7	63.1
270A Miami	AL4321	RSV-A AZ	56.5 236.9	95.72 RM11155	33 28 31.0 110 48 51.0	6.000 100	40.4 1333	26.2	39.1	44.9
270A Miami	KQSS	LIC_NCX AZ	60.7 241.1	92.73 BLH20060821ABQ	33 24 30.0 110 48 14.0	6.000 -24	23.5 1244	15.8 Globecasting, Inc.	54.6	54.8
271D Buckeye	1777278	APP_DV_ AZ	307.7 127.2	103.64 BNPFT20180130AGR	33 34 09.0 112 33 33.0	0.250	11.3 1227	1.4 Farmworker Educational Rad	81.6	65.2
269D Oro Valley	K269FV	LIC_DC_ AZ	147.9 328.2	98.62 BLFT20121022ABY	32 14 57.0 111 06 59.0	0.250 574	1.1 1345	30.5 Family Life Broadcasting,	88.7	68.0
270B Sasabe	AL2579	VAC SO	176.0 356.0	171.23	31 28 00.0 111 32 50.0	50.000 150	73.1 1219	65.0	87.4	83.1
271A Colonia Reforma	AL9102	VAC SO	212.2 31.7	168.64	31 42 59.0 112 37 30.0	3.000 100	68.6 607	24.0	90.1	110.0
274D Tucson	K274AQ	LIC_CN AZ	141.3 321.7	105.75 BLFT19981006TA	32 15 30.0 110 58 12.0	0.050 -37	0.5 768	7.3 World Radio Network, Inc.	95.8	98.3
217C2 Tucson	KXCI	LIC_DCN AZ	125.8 306.4	111.02 BLED19910917KB	32 24 54.0 110 42 56.0	0.340 1110	0.5 2646	24.3 Foundation For Creative Br	14.5R	96.5M
272C1 Clifton	KWRQ	LIC_NCX AZ	92.6 273.9	220.11 BLH20020419AAQ	32 53 23.0 109 19 26.0	4.300 690	91.6 1977	61.9 Double-r-communications LI	118.5	143.8
274B Nogales	XHQTFM	USE SO	160.1 340.4	198.87	31 19 10.0 110 57 36.0	50.000 150	7.8 1436	65.0	181.6	133.6
274B Nogales	XHQTFM	OPE_HN SO	160.1 340.4	198.87	31 19 10.0 110 57 36.0	9.650 -29	2.8 1257	65.0	186.6	133.6
270A Salome	AU6258628	VAC AZ	296.2 115.2	199.90 RM10344	33 46 54.0 113 36 42.0	6.000 100	51.3 716	34.1 Circle S Broadcasting Co.,	139.5	152.7
270A Salome	R14926	DEL AZ	297.3 116.3	196.12	33 47 48.0 113 33 28.0	6.000 100	31.2 733	21.1 Southwest Fm Broadcasting	155.8	161.9
269C1 Springerville	KQAZ	LIC_ZC_ AZ	53.8 234.9	238.21 BLH20001114AAB	34 15 06.0 109 35 06.0	55.000 379	8.4 2620	65.2 Wsk Family Trust (cathy Ko	212.4	172.5
272B Cananea	AL0630	VAC SO	149.7 330.4	259.30	30 58 57.0 110 18 01.0	50.000 150	45.3 1720	65.0	205.0	174.6

CH CI TY	CALL	TYPE STATE	ANT	AZI <--	DI ST FI LE #	LAT LNG	PWR(kW) HAAT (M)	INT(km) COR (M)	PRO(km) LICENSEE	Page # *IN* (Overlap in km)	2 *OUT*
269A	KXKR Huachuca Ci ty	CP _CX AZ		140.0 320.7	197.40 BNPH20070413AGV	31 38 06.0 110 19 57.0	6.000 -14	1.6 1369	15.8 Cochi se	186.3 Broadcasting	181.5 LI c
269A	KKYZ Sierra Vista	LIC _CN AZ		139.3 320.1	209.32 BLH19941005KC	31 33 59.0 110 13 57.0	3.000 100	2.5 1449	27.3 Cochi se	197.2 Broadcasting	181.9 LI c
217A	KSHM Show Low	LIC _CX AZ		41.0 221.8	198.23 BLED20110926AEB	34 20 26.0 110 15 22.0	2.700 75	1.6 2025	12.9 Radio 74	9.5R Internationale	188.7M
268B	AL5316 Alt ar	VAC ____ SO		183.8 3.7	255.56	30 42 34.0 111 51 11.0	50.000 150	5.4 582	65.0	239.0	190.2
269C2	NEW Bagdad	CP DHX AZ		316.6 135.6	240.54 BNPH20150911AHS	34 33 46.0 113 28 42.0	28.000 126	4.8 940	45.9 River Rat	221.4 Radio,	194.3 LI c
270A	R17741 Imuris	VAC ____ SO		162.5 342.9	259.12	30 46 41.0 110 51 23.0	3.000 100	44.9 1116	24.0	204.6	221.2
273C1	6893 Ladri l l era	____ BN		263.8 82.1	290.25	32 41 02.0 114 45 29.0	0.000	0.0 58	72.0	279.9	218.0
272C1	KJJJ Laughl in	LIC ZCX NV		313.0 131.5	335.42 BLH20090820ABV	35 01 58.0 114 21 57.0	17.000 576	93.5 1367	63.2 Steven M.	228.9 Greel ey	252.7
273C	AL4495 Puerto Lobos	VAC ____ SO		200.0 19.4	323.19	30 16 00.0 112 49 35.0	100.000 600	13.2 658	92.0	299.1	231.0
217A	KAWN Winslow	LIC _CX AZ		21.5 202.1	241.90 BLED20100504AAY	35 01 36.0 110 41 50.0	0.300 36	1.2 1489	7.4 American	9.5R Family Associati o	232.4M
274A	R17547 Agua Prieta	VAC ____ SO		132.4 313.6	273.42	31 19 33.0 109 32 56.0	3.000 100	2.7 1377	24.0	260.3	249.3
218B	XHSOAFM Caborca	USE ____ SO		190.2 10.0	259.74	30 41 50.0 112 09 29.0	50.000 150	5.2 450	65.0	10.0R	249.7M
218B	XHSOAFM Caborca	OPE _HN SO		190.2 10.0	259.74	30 41 50.0 112 09 29.0	50.000 20	2.7 320	65.0	10.0R	249.7M
217AA	R17759 Puerto Penasco	VAC ____ SO		223.6 42.6	256.61	31 19 00.0 113 32 13.0	6.000 100	2.5 105	28.0	6.0R	250.6M
218A	AL9189 Cananea	VAC ____ SO		149.7 330.4	258.97	30 58 55.0 110 18 02.0	3.000 100	1.6 1670	24.0	5.0R	254.0M
272D	KJJJ-FM2 Kingman	LIC DC_ AZ		319.7 138.4	310.48 BLFTB20100108ABT	35 06 48.0 113 53 00.0	0.500	28.6 2352	18.0 Steven M.	266.1 Greel ey	268.6
270B	XHPFFM Mexi cali	OPE _HN BN		264.6 82.5	355.26	32 38 37.0 115 27 09.0	14.200 60	39.7 68	65.0	305.3	268.6
272D	KJJJ-FM1 Lake Havasu Ci ty	CP DV_ AZ		307.2 125.8	289.78 BPFTB20151123AEF	34 33 06.0 114 11 37.0	0.600	10.2 1437	5.9 Steven M.	269.0 Greel ey	268.8
272D	KJJJ-FM1 Lake Havasu Ci ty	LIC DH_ AZ		307.2 125.8	289.78 BLFTB20100108ABU	34 33 06.0 114 11 37.0	1.000	6.2 1442	3.3 Steven M.	273.0 Greel ey	271.4
273C3	KUGO Grand Canyon Vi ll ag	LIC _CX AZ		352.2 171.9	329.55 BLH20100902ABL	35 56 43.0 112 10 17.0	14.000 74	3.1 2039	30.9 I tm, LI c	302.0	297.6
274B	2955 Esperanza	VAC ____ BN		263.8 81.7	368.35	32 35 10.0 115 35 03.0	0.000	0.0 40	65.0	358.0	303.0
217A	VA8943 Silver Ci ty	VAC _N NM		93.7 275.6	318.81	32 46 12.0 108 16 41.0	6.000 100	3.2 1957	33.5	9.5R	309.3M
217C3	KRXG Silver Ci ty	LIC _HX NM		91.8 273.7	321.42 BLED20131129AHV	32 51 48.0 108 14 28.0	0.620 432	1.7 2456	36.4 Regents Of New Mexi co	11.5R Stat	309.9M
217A	KHCK Houck	LIC _HX AZ		40.7 222.1	337.74 BLED20110822AEV	35 17 01.0 109 14 51.0	0.200 1	1.0 1930	13.5 Advance	9.5R Mini stries, Inc.	328.2M
218B	XHJCFM Mexi cali	USE ____ BN		264.6 82.5	356.07	32 38 37.0 115 27 09.0	50.000 150	5.8 158	65.0	10.0R	346.1M
218B	XHJCFM Mexi cali	OPE _HN BN		264.6 82.5	356.07	32 38 37.0 115 27 09.0	14.118 60	2.6 67	65.0	10.0R	346.1M
217C0	KGHR Tuba Ci ty	LIC DHX AZ		6.4 186.7	374.60 BLED20060718AAF	36 21 27.0 111 12 12.0	100.000 322	5.2 2097	2.8 Tuba Ci ty	24.5R High School Boar	350.1M

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.  
Reference station has protected zone issue: Mexi co

\* No actual interference will be caused to either KNIX-FM or KALV-FM since the worse case 100 DBU interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - PREDICTED 100 DBU INTERFERENCE CONTOUR  
K243BP CASA GRANDE, AZ, CH 271D

Coverage Study - NGDC 30 SEC  
03-02-2018

K243BP CH271 D , 0.25 kW, 401.6m HAAT, 850.0m COR AMSL  
Interference Contour = 100 dBu. Population = 0

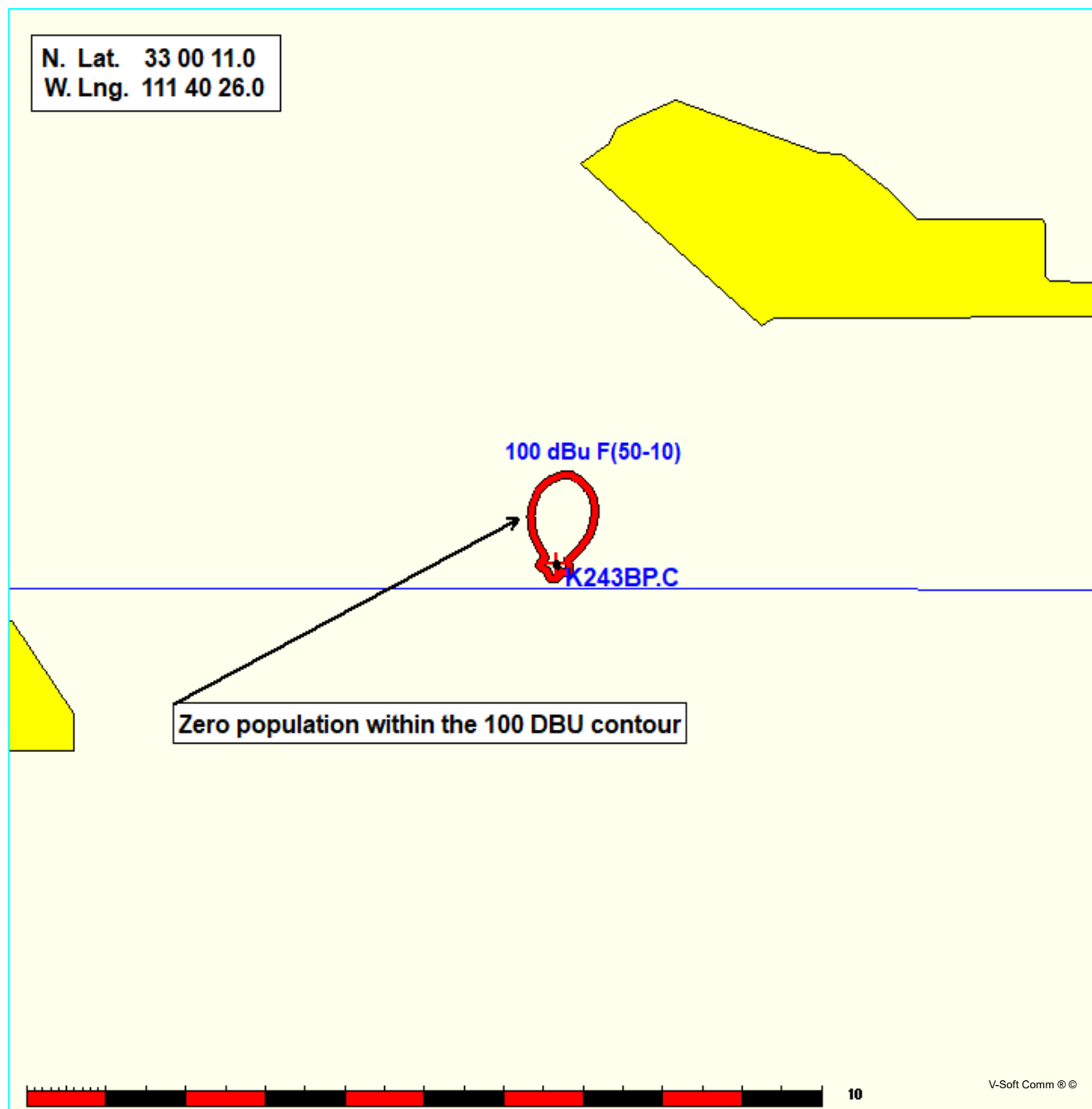


FIGURE 3 - DIRECTIONAL ANTENNA DATA

K243BP.C

03-02-2018

RMS(V) = .432

Graph is Relative Field

Azi	Field	dBk	kW
000	0.954	-06.430	0.228
010	1.000	-06.021	0.250
020	0.940	-06.558	0.221
030	0.844	-07.494	0.178
040	0.695	-09.181	0.121
050	0.508	-11.903	0.065
060	0.321	-15.890	0.026
070	0.190	-20.446	0.009
080	0.138	-23.223	0.005
090	0.144	-22.853	0.005
100	0.161	-21.884	0.006
110	0.180	-20.915	0.008
120	0.184	-20.724	0.008
130	0.167	-21.566	0.007
140	0.139	-23.160	0.005
150	0.126	-24.013	0.004
160	0.139	-23.160	0.005
170	0.161	-21.884	0.006
180	0.181	-20.867	0.008
190	0.189	-20.491	0.009
200	0.178	-21.012	0.008
210	0.156	-22.158	0.006
220	0.135	-23.414	0.005
230	0.127	-23.945	0.004
240	0.143	-22.914	0.005
250	0.171	-21.361	0.007
260	0.185	-20.677	0.009
270	0.177	-21.061	0.008
280	0.157	-22.103	0.006
290	0.142	-22.975	0.005
300	0.145	-22.793	0.005
310	0.208	-19.659	0.011
320	0.353	-15.065	0.031
330	0.545	-11.293	0.074
340	0.729	-08.766	0.133
350	0.868	-07.250	0.188

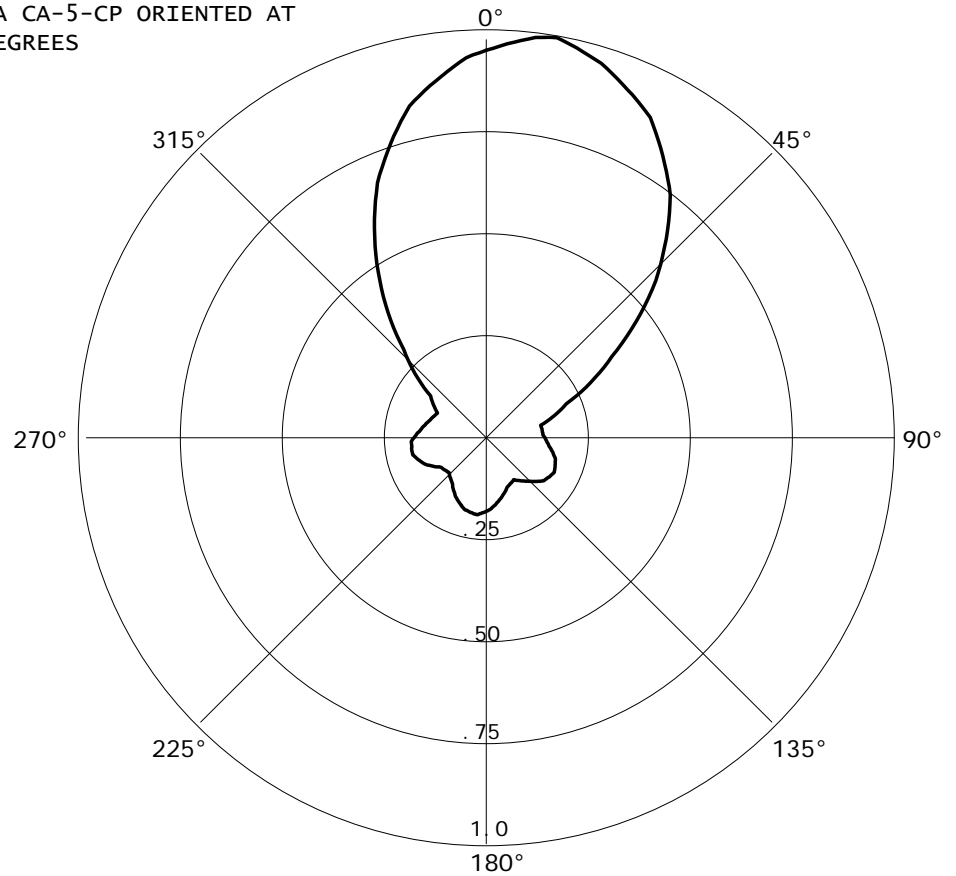
SCALA CA-5-CP ORIENTED AT  
10 DEGREES

FIGURE 4 - FILL-IN MAP WITH KLVA(FM)  
K243BP CASA GRANDE, AZ, CH 271D

Coverage Study - NGDC 30 SEC  
03-02-2018

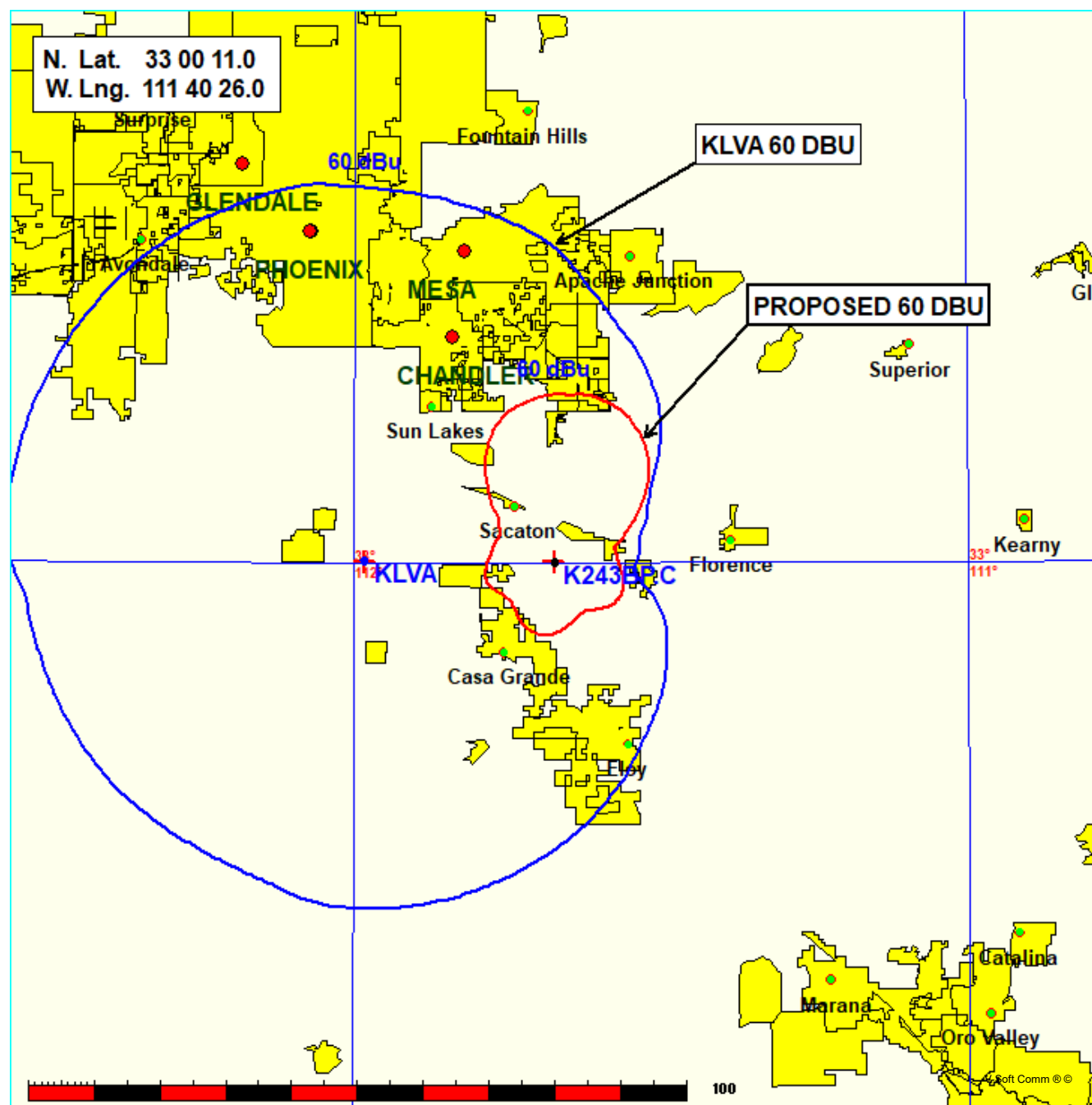


FIGURE 5 - PRESENT AND PROPOSED 60 DBU  
K243BP CASA GRANDE, AZ, CH 271D

Coverage Study - NGDC 30 SEC  
03-02-2018

