

TECHNICAL STATEMENT
K245CD ALBUQUERQUE, NEW MEXICO
PAN AMERICAN BROADCASTING, INC.
FCC FORM 349
MAY 2019

This Technical Statement is made in support of a minor change application for FM translator station K245CD at Albuquerque, facility ID 140729. K245CD seeks to modify its current directional antenna system and increase its Effective Radiated Power from 0.16 Kilowatts to 0.25 kilowatts. No other changes are being proposed. The following will show that the new proposed operation of K245CD will meet all of the Commissions technical requirements for an FM translator station.

Figure 1 is a detailed interference study conducted on channel 245D with these new proposed facilities. It shows that the new operation of K245CD will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 245, with the exception of 3rd adjacent channel station KBZU Albuquerque, New Mexico operating on channel 242C, facility ID 48596 and second adjacent channel KKSS Santa Fe, New Mexico operating on channel 247C, facility ID 63928.

The proposed operation of K245CD on 244D is located within the protected 60 dB μ contours of 3rd adjacent and 2nd adjacent channel of KBZU and KKSS. The predicted F(50-50) field strength of KBZU at the proposed K245CD transmitter site is 130.5 dB μ and KKSS is 74.2 dB μ . Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K245CD on channel 244D is an additional 40 dB μ or 114.2 dBu (as referenced from KKSS).

Figure 2 shows the coverage area for the worse case 100 dB μ interference contour F(50-10) and shows that there is no population in the area of interference. The applicant, Pan American 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. There are no homes nearby the proposed existing tower site, which is a privately owned with private gated access. The transmitter building is uninhabited and does not have indoor plumbing. Figure 3 is a Satellite map showing the area around the transmitter site. This site is a multi-user communications tower site known as Sandia Crest. None of the other buildings and/or towers are occupied except for the occasion maintenance personnel. Figure 4 shows the vertical pattern and interference study for the proposed Aldena antenna system. It shows that the worst case 114.2 dB μ interference contour will only extend 37.4 meters from the base of the tower in the maximum part of the yagi's lobe. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K245CD until such interference can be eliminated.

The proposed operation of K245CD Albuquerque will be considered a "Fill-In" operation for Class D AM station KDAZ Albuquerque, New Mexico, facility ID 51424. KDAZ(AM) operates with 1 kilowatts daytime with a directional antenna system on 730 kHz. Figure 6 shows that the proposed 60 dB μ contour for the proposed K245CD will not extend beyond the daytime 2.0 mV/m contour of KDAZ. 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 new pattern plot of the proposed directional antenna system for K245CD. The Adena Yagi antenna will be oriented at 230 degrees.

It was found that the new proposed operation of K245CD Albuquerque, New Mexico on channel 245D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K245CD ALBUQUERQUE, NM, CH. 245D

REFERENCE
35 12 53.0 N.
106 27 02.0 W.

CH# 245D - 96.9 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 3235 M
Average Protected F(50-50)= 7.09 km
Standard Directional

DISPLAY DATES
DATA 05-04-19
SEARCH 05-04-19

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
242C Albuquerque	KBZU	LIC _CY NM	160.1 340.1	0.29 BLH19870210KB	35 12 44.0 106 26 58.0	20.000 1260	9.1 3278	93.5 Radio License Holding Cbc,	-24.8*	-93.5*
245D Albuquerque	K245CD	LIC DC_ NM	0.0 0.0	0.00 BLFT20180917AAB	35 12 53.0 106 27 02.0	0.160	3235	---Reference--- Pan American Broadcasting,		
247C Santa Fe	KKSS	LIC _CY NM	353.8 173.8	63.15 BLH19850926KA	35 46 50.0 106 31 35.0	100.000 572	15.9 3057	98.1 Agm Nevada, LIc	40.4	-35.0*
245L1 Madri d	KMRD-LP	LIC ____ NM	52.4 232.6	33.93 BLL20141024ACI	35 24 01.6 106 09 14.6	0.035 50	1940	Kmrd Inc	17.0	1.1
244C3 Grants	KSFE	LIC _CX NM	272.7 92.0	104.36 BLH20121203BTF	35 15 11.0 107 35 46.0	0.265 818	55.3 3349	35.8 Royal Diversified Industri	5.2	1.6
245C0 Farmington	KDAG	LIC _CX NM	324.3 143.5	219.99 BLH20060309AED	36 48 52.0 107 53 32.0	100.000 303	177.7 2129	76.4 Capstar Tx, LIc	16.0	108.6
244L1 Español a	KSHF-LP	LIC ____ NM	22.7 203.0	93.54 BLL20150129AGD	35 59 28.0 106 02 53.0	0.100	1766	Holy Cross, A New Mexico N	80.0	78.8
298C1 Los Alamos	KQBA	LIC _C_ NM	21.3 201.6	104.29 BLH20000410ABB	36 05 21.0 106 01 41.0	100.000 243	0.1 2140	5.4 Hutton Broadcasting, LIc	21.5R	82.8M
244C3 Las Vegas	KMDZ	LIC _CX NM	69.7 250.4	119.21 BLH20150918ABL	35 34 48.0 105 12 59.0	6.500 -68	24.0 1969	16.1 Sangre De Cristo Broadcast	92.0	96.9
244C1 Capi tan	KNMB	LIC _CX NM	162.8 343.2	210.08 BLH20160120ABM	33 24 14.0 105 46 55.0	1.000 917	77.9 3312	51.0 Mtd, Inc.	98.6	126.1
298C3 Al amo Communi ty	KABR	LIC _CX NM	227.5 46.9	130.65 BLED20120402AUZ	34 25 01.0 107 30 04.0	10.000 -41	0.1 1917	5.4 Alamo Navajo School Board,	11.5R	119.2M
246C1 Roswel l	KBCQ-FM	LIC _CN NM	136.1 317.2	277.15 BLH19851224KD	33 24 05.0 104 22 45.0	100.000 110	84.6 1203	55.4 Majestic Broadcasting, LIc	171.4	215.6
246C3 La Jara	KZBR	LIC _CX CO	7.1 187.3	240.86 BLH20080416AAD	37 22 05.0 106 06 44.0	25.000 55	42.4 2458	26.0 Wolf Creek Broadcasting, L	195.4	201.9
243C2 Raton	KBKZ	LIC _CX NM	41.4 222.5	265.72 BLH20040927AEI	36 59 33.0 104 28 24.0	5.400 295	4.2 2609	49.0 Phillips Broadcasting Comp	258.3	216.1
248C1 Shi prock	KNDN-FM	LIC _CX NM	300.9 119.4	276.09 BLH20160121AAK	36 27 39.8 109 05 43.5	1.500 729	2.6 2994	55.2 Krjg, Inc.	237.4	220.2
243C3 Del Norte	KSLV-FM	LIC NC_ CO	357.5 177.4	279.35 BLH20081024AAU	37 43 47.0 106 35 18.0	0.930 485	2.0 3343	37.9 San Luis Valley Broadcasti	266.0	239.4
247A Lake Ci ty	AU9850949	VAC ____ CO	346.4 165.9	321.79 RM9938	38 01 47.0 107 18 52.0	6.000 100	3.9 3460	43.6 Packer Radi o Project	301.5	277.2
243C2 Bovi na	KKNM	LIC ZC_ TX	99.4 281.4	325.22 BLH20080417AAS	34 41 17.0 102 56 53.0	50.000 140	4.7 1432	42.8 Hprn Networks, LIp	312.8	281.3
248C1 Cl ayton	KLMX-FM	LIC _H_ NM	64.1 246.0	324.66 BLH20131223ACG	36 26 39.0 103 11 24.0	52.000 110	4.2 1629	39.4 Jimmy N. Mccollum	317.3	284.0
298C1 Cl ovi s	KSMX-FM	LIC _CX NM	110.5 292.3	311.91 BMLH20090810ACV	34 11 34.0 103 16 44.0	100.000 165	0.1 1397	5.4 Rooney Moon Broadcasti ng,	21.5R	290.4M
242C El Paso	KHEY-FM	LIC _CY TX	180.4 0.4	379.13 BLH7752	31 47 47.0 106 28 55.0	100.000 424	4.5 1649	53.3 Cc Li censes, LIc	334.1	305.6
248C El Paso	KBNA-FM	LIC _EN TX	180.4 0.4	379.53 BLH19890426KA	31 47 34.0 106 28 47.0	100.000 332	3.2 1547	33.0 97.5 Licensee Tx, LIc	335.6	312.2
247C1 Vi rden	KFMR	APP ZCX NM	226.5 44.9	369.95 BLH20190412ABK	32 53 22.0 109 19 23.0	1.700 682	2.8 1975	55.3 Cochi se Medi a Li censes LIc	318.2	313.5
247C1 Vi rden	KFMR	CP ZCX NM	226.5 44.9	369.95 BMPH20170724AAC	32 53 22.0 109 19 23.0	1.700 682	2.8 1975	55.3 Cochi se Medi a Li censes LIc	318.2	313.5
248C3 Poncha Springs	KWUZ	LIC NCX CO	6.0 186.2	361.43 BLH20170831BCE	38 27 11.0 106 01 02.0	0.250 834	1.1 3575	39.6 Three Eagl es Communi cation	352.3	321.6

CH CI TY	CALL	TYPE STATE	ANT	AZI <--	DI ST FI LE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LI CENSEE	Page # 2 *IN* (Overl ap in km)	*OUT*
246L1 El Paso	KAWU-LP	LIC TX	---	179.9 359.9	379.01 BLL20180326AAA	31 47 50.6 106 26 35.0	0.050		1186	331.7 Sin Fronteras Organizing P	327.0
298C1 Olathe	KSYF	LIC NCX CO		343.2 162.5	368.62 BMLED20150623AAI	38 23 15.0 107 40 26.0	20.000 531	0.1 2909	5.4 Montrose Christian Broadca	21.5R	347.1M

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.
« = Station meets FCC minimum distance spacing for its class.

* No actual interference will be caused to either KBZU or KKSS since the worst case 100 DBU interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - PREDICTED 100 DBU INTERFERENCE CONTOUR
K245CD ALBUQUERQUE, NM, CH. 245D

Coverage Study - NGDC 30 SEC
05-04-2019

K245CD CH245 D , 0.25 kW, 0.0m HAAT, 3235.0m COR AMSL
Interference Contour = 100 dBu. Population = 0

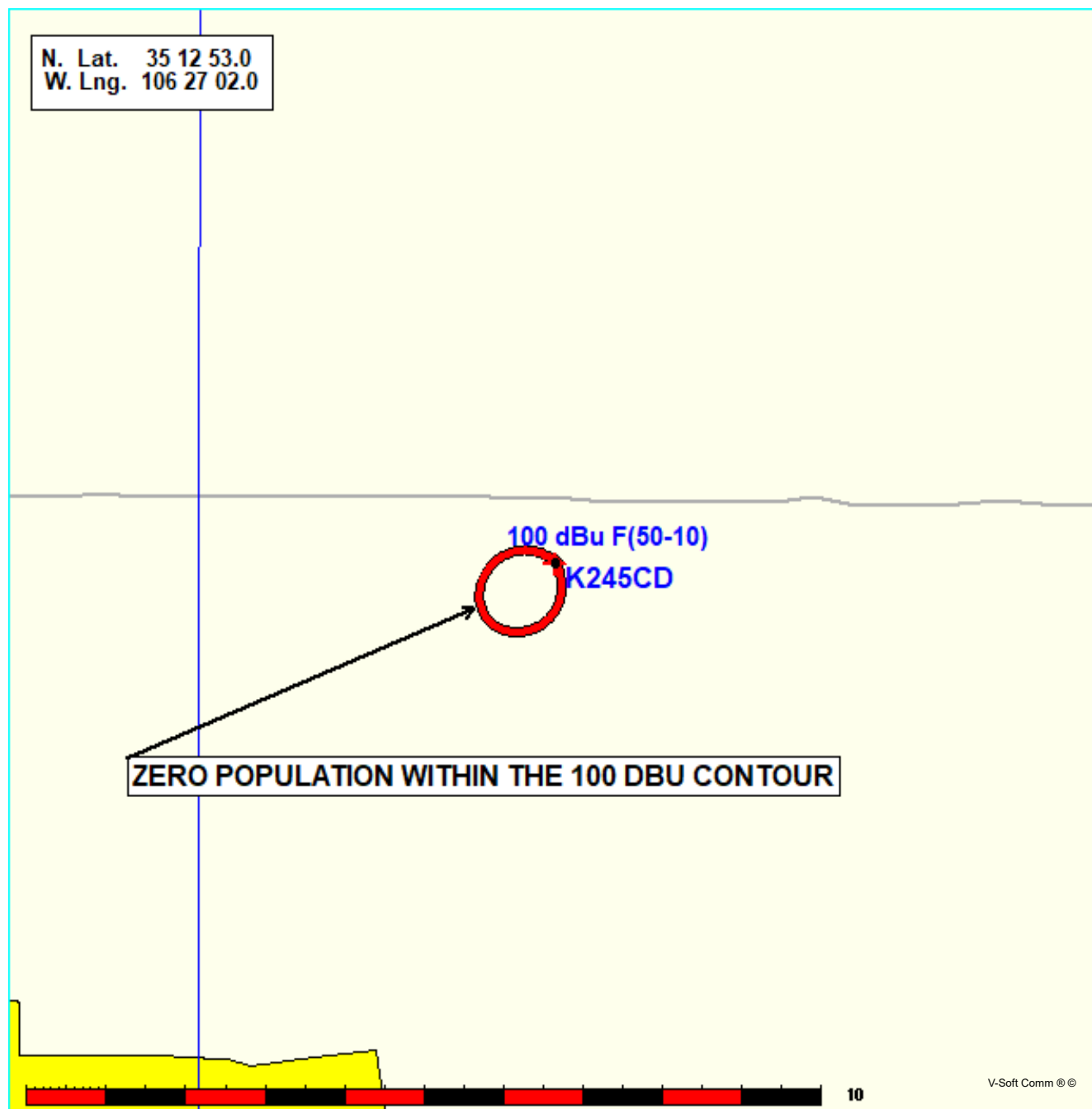
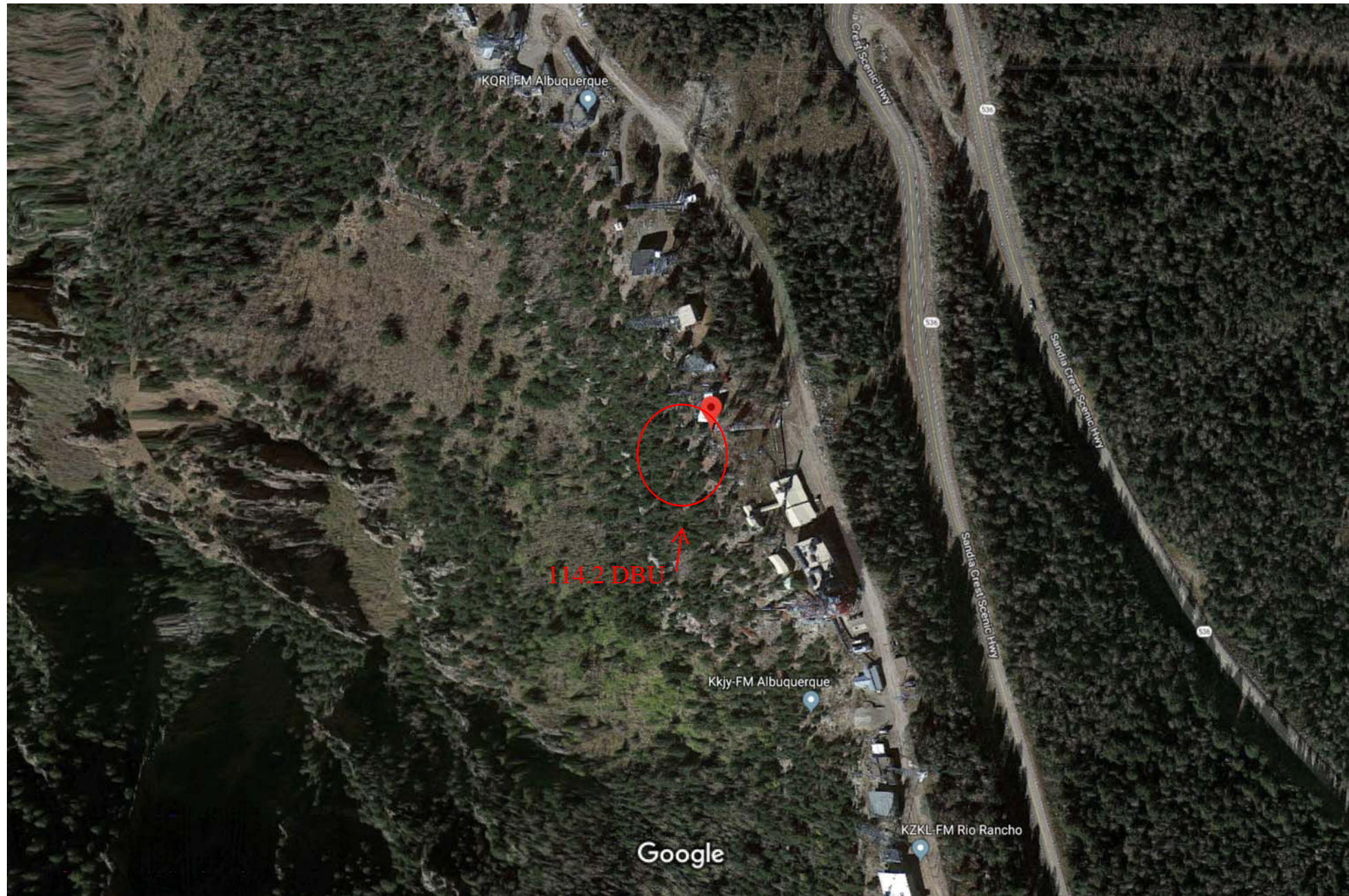


FIGURE 3 - SATELLITE MAP SHOWING AREA AROUND THE TRANSMITTER SITE

Google Maps 35°12'53.2"N 106°27'04.3"W



Imagery ©2019 Google, Map data ©2019 Google 100 ft

FIGURE 4 - VERTICAL PATTERN STUDY

XField.out

K245CD ALBUQUERQUE, NM, Showing Protection to KKSS
 Geographic Coordinates: N. 35 12 53.00 W. 106 27 02.00
 74.1204(d) Study - Using NGDC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 6 Meters
 K245CD Antenna Model = ALP-05-02-91X

Protected Station's Contour = 74.22173 dBu
 Translator's or LPFM's full Interference contour 114.22173

Review Azimuth = 0 Degrees True
 Horizontal Relative Field at Review Azimuth = 0.030
 Translator/LPFM ERP on the horizontal at Review Azimuth = 0.0 kW
 Distance between stations = 63.3 km
 Protected Station= KKSS, 100 kW, 3057 M Meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	0.03	0.0075	037.3632	037.3632	006.000
05.00	0.99	0.03	0.0074	036.9896	036.8488	002.776
10.00	0.979	0.03	0.0072	036.5861	036.0302	-000.353
15.00	0.953	0.03	0.0068	035.5885	034.3758	-003.211
20.00	0.92	0.03	0.0063	034.3741	032.3011	-005.757
25.00	0.877	0.03	0.0058	032.7563	029.6873	-007.843
30.00	0.829	0.03	0.0052	030.9816	026.8308	-009.491
35.00	0.772	0.03	0.0045	028.8332	023.6188	-010.538
40.00	0.715	0.03	0.0038	026.7147	020.4646	-011.172
45.00	0.647	0.03	0.0031	024.1628	017.0857	-011.086
50.00	0.57	0.03	0.0024	021.2970	013.6895	-010.314
55.00	0.487	0.03	0.0018	018.1847	010.4303	-008.896
60.00	0.388	0.03	0.0011	014.5081	007.2541	-006.564
65.00	0.292	0.03	0.0006	010.8988	004.6061	-003.878
70.00	0.187	0.03	0.0003	006.9757	002.3858	-000.555
75.00	0.095	0.03	0.0001	003.5495	000.9187	002.571
80.00	0.045	0.03	0.0000	001.6813	000.2920	004.344
85.00	0.032	0.03	0.0000	001.1844	000.1032	004.820
90.00	0.03	0.03	0.0000	001.1209	000.0000	004.879

X-Field™ By V-Soft Communications®LLC

FIGURE 5 - DIRECTIONAL ANTENNA DATA

K245CD

05-04-2019

RMS(V) = .465

Graph is Relative Field

Azi	Field	dBk	kW
000	0.030	-36.478	0.000
010	0.030	-36.478	0.000
020	0.030	-36.478	0.000
030	0.030	-36.478	0.000
040	0.030	-36.478	0.000
050	0.030	-36.478	0.000
060	0.030	-36.478	0.000
070	0.030	-36.478	0.000
080	0.030	-36.478	0.000
090	0.030	-36.478	0.000
100	0.030	-36.478	0.000
110	0.030	-36.478	0.000
120	0.030	-36.478	0.000
130	0.030	-36.478	0.000
140	0.035	-35.139	0.000
150	0.080	-27.959	0.002
160	0.205	-19.786	0.011
170	0.378	-14.471	0.036
180	0.542	-11.341	0.073
190	0.685	-09.307	0.117
200	0.810	-07.851	0.164
210	0.908	-06.859	0.206
220	0.969	-06.294	0.235
230	1.000	-06.021	0.250
240	0.969	-06.294	0.235
250	0.908	-06.859	0.206
260	0.810	-07.851	0.164
270	0.685	-09.307	0.117
280	0.542	-11.341	0.073
290	0.378	-14.471	0.036
300	0.205	-19.786	0.011
310	0.080	-27.959	0.002
320	0.035	-35.139	0.000
330	0.030	-36.478	0.000
340	0.030	-36.478	0.000
350	0.030	-36.478	0.000

ALDENA

ALP-05-02-91X

YAGI

ORIENTED AT

230 DEGREES

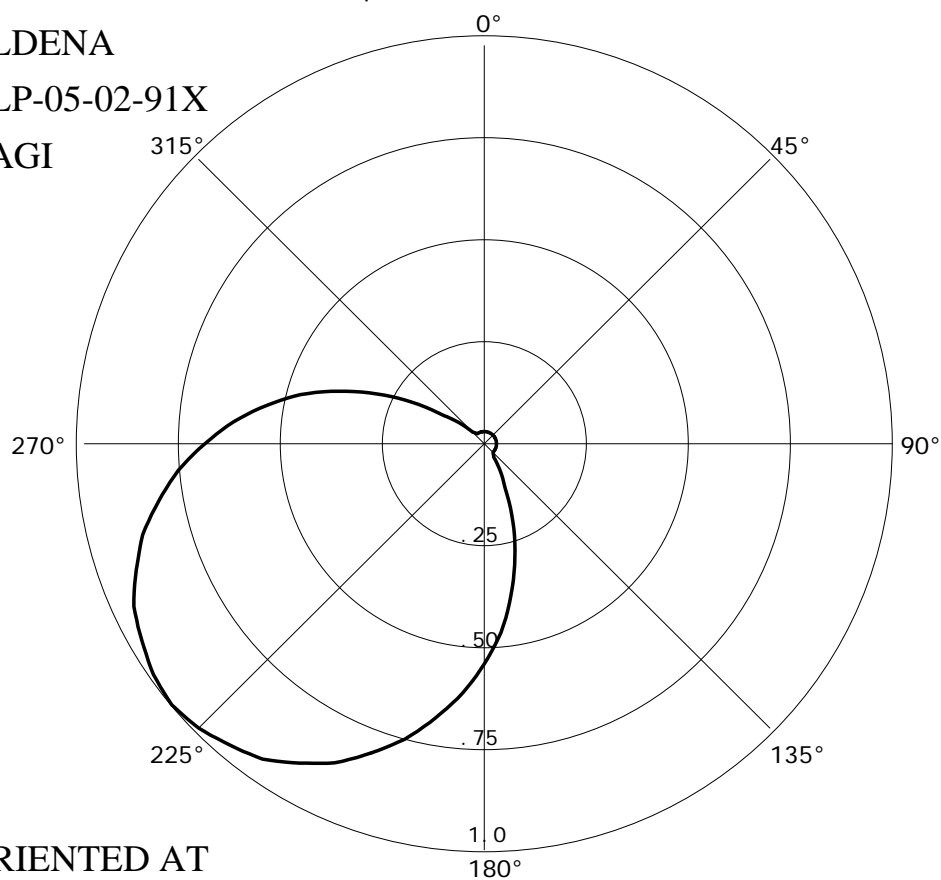


FIGURE 6 - FILL-IN MAP WITH KDAZ(AM)
K245CD ALBUQUERQUE, NM, CH. 245D

Coverage Study - NGDC 30 SEC
05-04-2019

K245CD CH245 D , 0.25 kW, 0.0m HAAT, 3235.0m COR AMSL
Service Contour = 60 dBu. Population = 726,515

