

Engineering Exhibit

Minor Modification of K229DB

Facility ID No. 151323

This exhibit presents the technical details of a change in antenna location to an adjacent tower location. The distance of this relocation is approximately 40 meters along a bearing of 152.8°T from the presently licensed location.

Antenna Location

The proposed antenna for K229DB is to be mounted 30.5 meters above ground on the tower identified by antenna structure registration number 1308803 and will have a directional pattern as depicted in Figure 0.

73.1204 Compliance

We will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second or third adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents in the location of the proposed translator antenna location.

Concerning KDKB(FM) In Figure 2 a map showing the predicted 142 dBu signal contour of the protected facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 182 dBu in a habitable/populated area. Utilizing the line of sight equation shown in Figure 3 it has been determined that a 182 dBu signal developed by 250 watts will have a maximum distance of 0.090 meters, effectively not leaving the transmit antenna which has a physical size greater than 1.34 meters. Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

Fill-in and Minor Change Status

This proposal is to serve as a fill-in translator for station KOY(AM) Facility ID 63914, Phoenix, AZ. The map of **Figure 3** demonstrates that the proposed 60 dBu contour is contained within that of the KOY(AM) facility. It can also be seen that the proposed and permitted facilities have service contour overlap.

RF Fields Statement

Upon completion of construction and during the equipment test period, we will make proper radiofrequency electromagnetic (RF) field strength measurements throughout the transmitter site area to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. If necessary, appropriate marking, barriers and or fences will be erected at such distances and in such a manner as to prevent the exposure of humans to RF fields in excess of the FCC Guidelines (OET Bulletin No. 65, Edition 97-01, August 1997).

Figure 0. Antenna Pattern

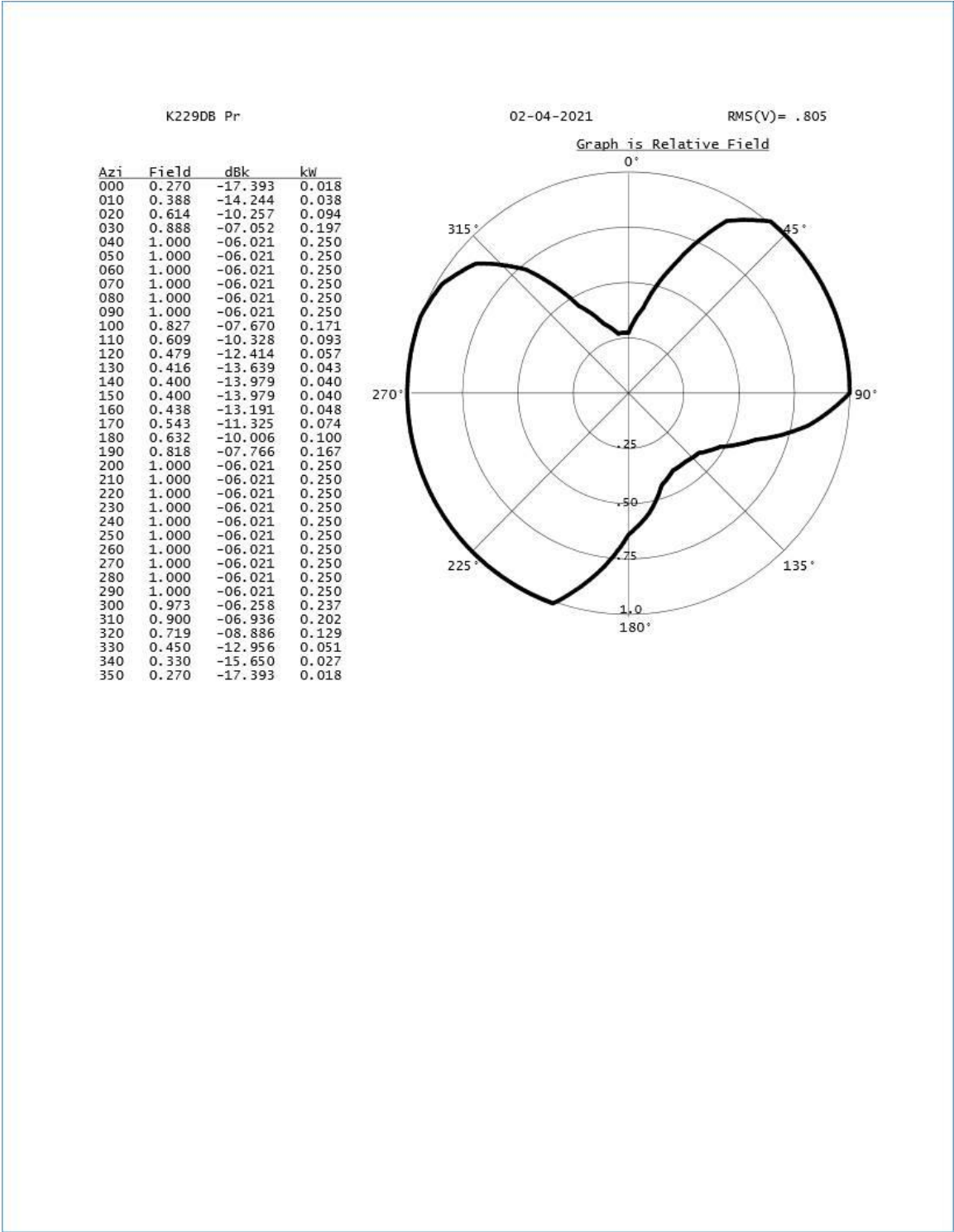


Figure 1. Overlap and Spacing Study

K2290B At new tower, Openn Pattern by R.M. TGL Mod											
Ihm Licenses, LLC											
REFERENCE		CH# 2290		- 93.7 MHz, Pwr= 0.25 kW DA, HAAT= 456.5 M, COR= 826.7 M		Average Protected F(50-50)= 27.54 km		Standard Directional		DISPLAY DATES	
33 20 03.70 N,		112 03 41.20 W.								DATA 02-01-21	
										SEARCH 02-04-21	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
227C	KDKB	LIC_CN		240.4	0.16	33 20 01.00	100.000	11.9	82.0	-38.6*	-83.0*
Mesa		AZ		60.4	BLH20101116AIX	112 03 46.90	508	871	Phoenix FCC License		Sub, L
2290	K2290B	LIC DCN		332.8	0.04	33 20 05.00	0.250	60.0	18.1	-78.5*	-79.9*
Phoenix		AZ		152.8	BLFT20160928ACP	112 03 42.00	809		Ihm Licenses, LLC		
229C	KRQQ	LIC_CN		143.5	149.52	32 14 56.80	93.000	194.3	90.1	-63.0*	0.1
Tucson		AZ		324.1	BMLH20130610AAM	111 06 59.40	613	1378	Ihm Licenses, LLC		
230L1	KWSS-LP	LIC_CN		355.2	29.01	33 35 39.90	0.002			2.9	0.4
Scottsdale		AZ		175.2	BLL20140918AAA	112 05 15.00	251	662	KWSS Radio		
231C1	KRDE	LIC ZCN		91.9	113.90	33 17 37.20	4.700	4.4	72.8	82.4	40.0
San Carlos		AZ		272.6	BMLH20110408ABG	110 50 11.30	1039	2390	Linda C. Corso		
230C	KMGN	LIC_CN		15.5	188.71	34 58 08.10	100.000	117.5	80.5	45.9	76.4
Flagstaff		AZ		195.8	BMLH19940818KG	111 30 30.50	460	2626	Flagstaff Radio, Inc		
282C	KAJM	LIC NCN		345.0	102.88	34 13 47.10	40.000	0.0	0.0	28.5R	74.4M
Camp Verde		AZ		164.8	BMLH20120321AES	112 21 05.50	807	2323	Sierra H Broadcasting, Inc		
231B	AL2733			204.6	179.84	31 51 41.25	50.000	5.1	65.0	146.8	112.7
Sonoita		SO		24.2		112 51 18.58	150	611			
231A	R14926	VAC		290.7	147.90	33 47 48.10	6.000	1.9	19.2	117.6	115.7
Salome		AZ		109.9		113 33 30.74	100	734	Southwest Fm Broadcasting		
228C3	AU9411804	VAC		345.4	176.69	34 52 16.08	25.000	41.5	22.7	117.6	119.9
Paulden		AZ		165.1	RM11403	112 33 02.64	100	1529	Sierra H Broadcasting, Inc		

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.
Reference station has protected zone issue: Mexico

Figure 2. Contour Map

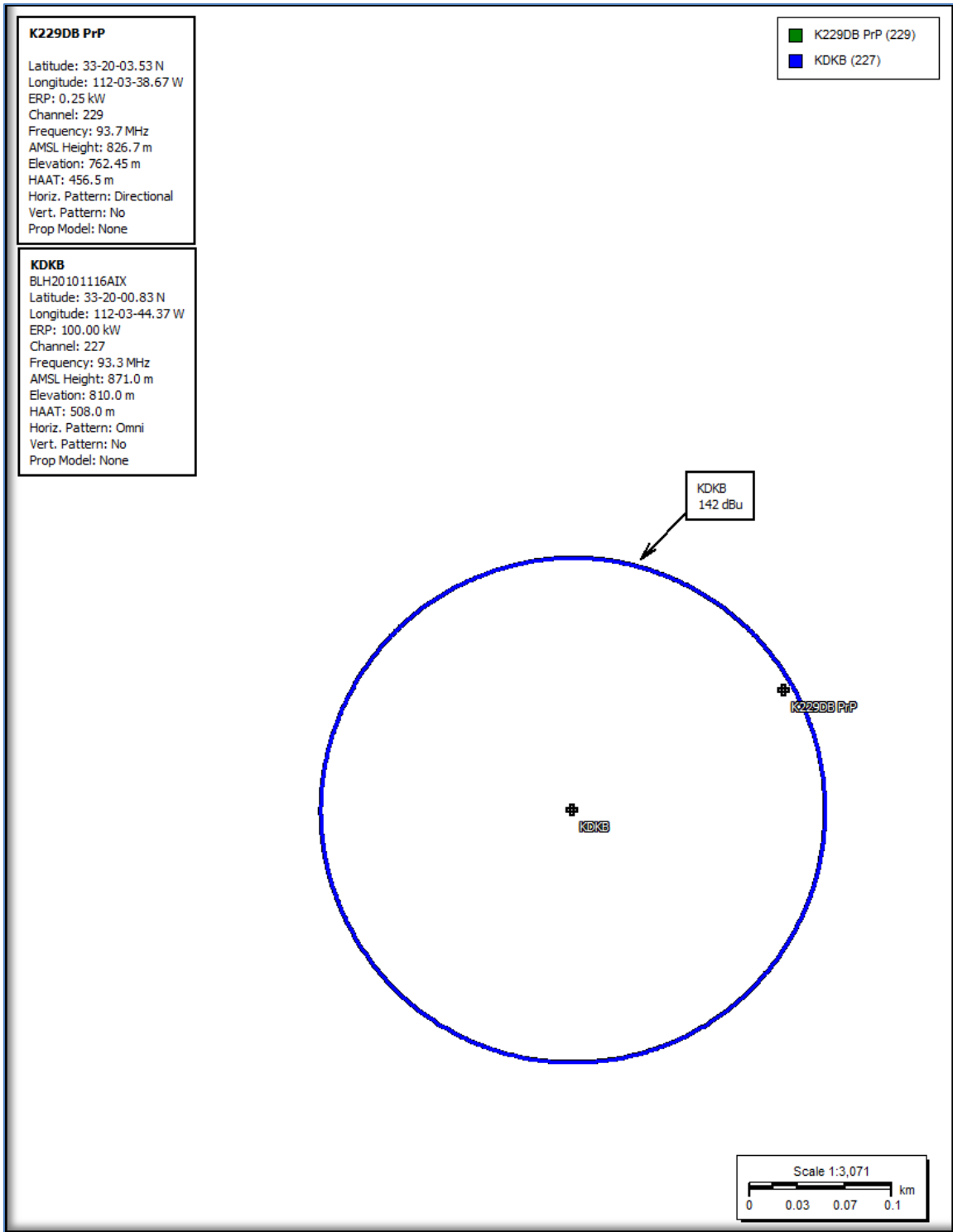


Figure 3. Fill-in and Minor Change Contour Map

