

IGLESIA JESUCRISTO ES MI REFUGIO, INC.  
FM Translator K222BS  
Lackland City, TX  
CH290FT, 105.9 MHz, 0.25 kW-DA, 39.3m AAT

### ENGINEERING STATEMENT

This engineering statement, together with the attached figures, has been prepared on behalf of Iglesia Jesucristo Es Mi Refugio, Inc., licensee of FM translator station K222BS (FCC ID# 139129), Lackland City, TX. This translator was originally on channel 221 but was forced to move to channel 222 due to interference complaints. Though operation was authorized for channel 222, interference complaints have displaced the translator from operating. Hence channel 290 has been found to comply with the Commission's rules and will operate with a Scala CA2-FM/CP directional antenna oriented at 130°T (no rotation) to avoid prohibitive contour overlap.

The facility will operate with 0.25 kW circular polarization at 39.3m AAT from a structure 73.1 meters above ground level, which bears ASR #1056843.

### REQUEST FOR WAIVER OF OVERLAP WITH KSMG

While the proposed 111 dBu contour is within the 71 dBu contour of KSMG, Seguin, TX, Figure 2, a USGS Topo map, shows no population within that proposed contour. Since the 111dBu contour causes no interference to any person, the waiver appears justified.

### ENVIRONMENTAL CONSIDERATIONS

This was addressed in OET Bulletin #65, released August 1, 1997. Table B on Page 67 of the document depicts the ANSI/IEEE protection requirements. The maximum permissible exposure for uncontrolled environments in the 30 to 300 MHz spectrum is a power density of 0.2 milliwatts per centimeter squared (mw/cm<sup>2</sup>).

Since the applicant will employ a single-bay Scala CA2-FM/CP circularly polarized directional antenna, the vertical elevation pattern of that antenna has been used in determining the effective radiated power below the horizon toward all areas 2 meters above ground level. For the uncontrolled environment in the FM spectrum 2 meters above ground level, the power density will be 0.0055 mw/cm<sup>2</sup>, or 2.75 % of the allowed 0.2 mw/cm<sup>2</sup>.

Should any maintenance worker require access to the structure, the applicant will either reduce power or cease operation until workers are outside the tower fence. Appropriate RF warning signs will be placed on all sides of the fence and it may be assumed that there will be no significant effect on the human environment with regard to exposure of the general public.

## ATTACHED EXHIBITS

Figure 1 is a tabulation and polar plot of the proposed directional pattern envelope.


Figure 2 is a portion of a USGS topo map showing the proposed site and absence of population within the proposed 111dBu contour.

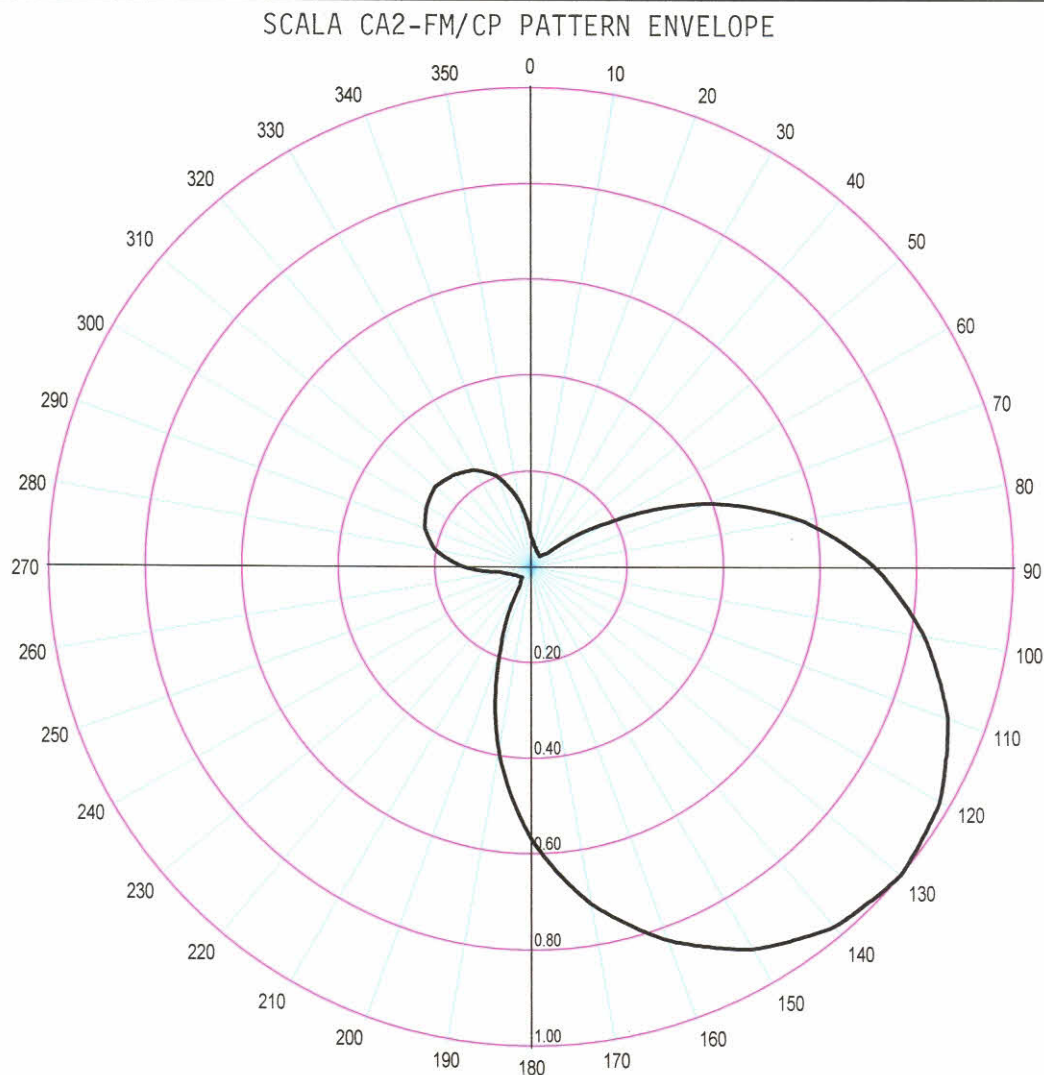
Figure 3A is an allocation map showing all pertinent stations and absence of prohibitive contour overlap, save for the proposed 111dBu contour within the KSMG 71dBu contour.

Figure 3B is a detailed allocation map showing the KSMG contours and the contours of the proposed translator.

Figure 4 shows the proposed 60 dBu and 54 dBu contours of the translator.

June 29, 2009

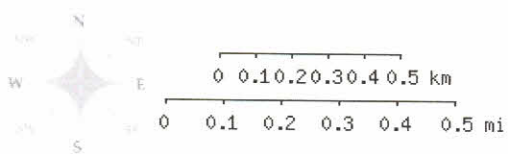
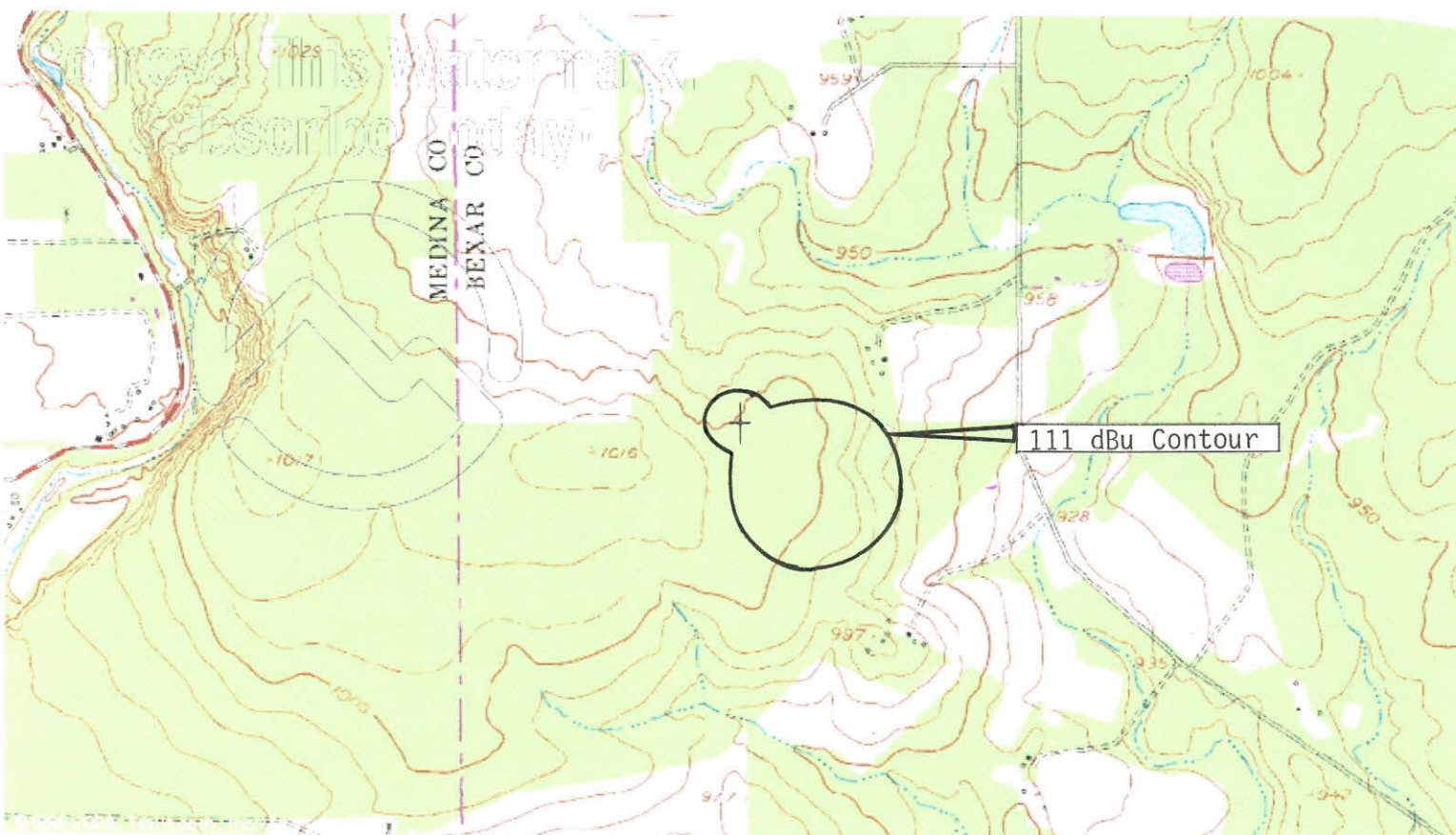
  
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William J. Sitzman  
Consulting Radio Engineer



NOTE: This pattern will be oriented at 130 degrees as shown without any pattern rotation.

Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk
0.0	0.064	1.024	-29.897	90.0	0.713	127.092	-8.959	180.0	0.568	80.656	-10.934	270.0	0.140	4.900	-23.098
5.0	0.054	0.729	-31.373	95.0	0.770	148.225	-8.291	185.0	0.478	57.121	-12.432	275.0	0.171	7.310	-21.361
10.0	0.044	0.484	-33.152	100.0	0.827	170.982	-7.670	190.0	0.387	37.442	-14.266	280.0	0.201	10.100	-19.957
15.0	0.040	0.400	-33.979	105.0	0.873	190.532	-7.200	195.0	0.286	20.449	-16.893	285.0	0.217	11.772	-19.291
20.0	0.035	0.306	-35.139	110.0	0.919	211.140	-6.754	200.0	0.185	8.556	-20.677	290.0	0.233	13.572	-18.673
25.0	0.033	0.272	-35.650	115.0	0.948	224.676	-6.484	205.0	0.114	3.249	-24.883	295.0	0.241	14.520	-18.380
30.0	0.031	0.240	-36.193	120.0	0.977	238.632	-6.223	210.0	0.043	0.462	-33.351	300.0	0.249	15.500	-18.097
35.0	0.030	0.225	-36.478	125.0	0.988	244.036	-6.125	215.0	0.036	0.324	-34.895	305.0	0.254	16.129	-17.924
40.0	0.028	0.196	-37.077	130.0	0.999	249.500	-6.029	220.0	0.028	0.196	-37.077	310.0	0.259	16.770	-17.755
45.0	0.036	0.324	-34.895	135.0	0.988	244.036	-6.125	225.0	0.030	0.225	-36.478	315.0	0.254	16.129	-17.924
50.0	0.043	0.462	-33.351	140.0	0.977	238.632	-6.223	230.0	0.031	0.240	-36.193	320.0	0.249	15.500	-18.097
55.0	0.114	3.249	-24.883	145.0	0.948	224.676	-6.484	235.0	0.033	0.272	-35.650	325.0	0.241	14.520	-18.380
60.0	0.185	8.556	-20.677	150.0	0.919	211.140	-6.754	240.0	0.035	0.306	-35.139	330.0	0.233	13.572	-18.673
65.0	0.286	20.449	-16.893	155.0	0.873	190.532	-7.200	245.0	0.040	0.400	-33.979	335.0	0.217	11.772	-19.291
70.0	0.387	37.442	-14.266	160.0	0.827	170.982	-7.670	250.0	0.044	0.484	-33.152	340.0	0.201	10.100	-19.957
75.0	0.478	57.121	-12.432	165.0	0.770	148.225	-8.291	255.0	0.054	0.729	-31.373	345.0	0.171	7.310	-21.361
80.0	0.568	80.656	-10.934	170.0	0.713	127.092	-8.959	260.0	0.064	1.024	-29.897	350.0	0.140	4.900	-23.098
85.0	0.641	102.720	-9.883	175.0	0.641	102.720	-9.883	265.0	0.102	2.601	-25.849	355.0	0.102	2.601	-25.849





Lackland, TX Ch290FT Translator Allocation Map

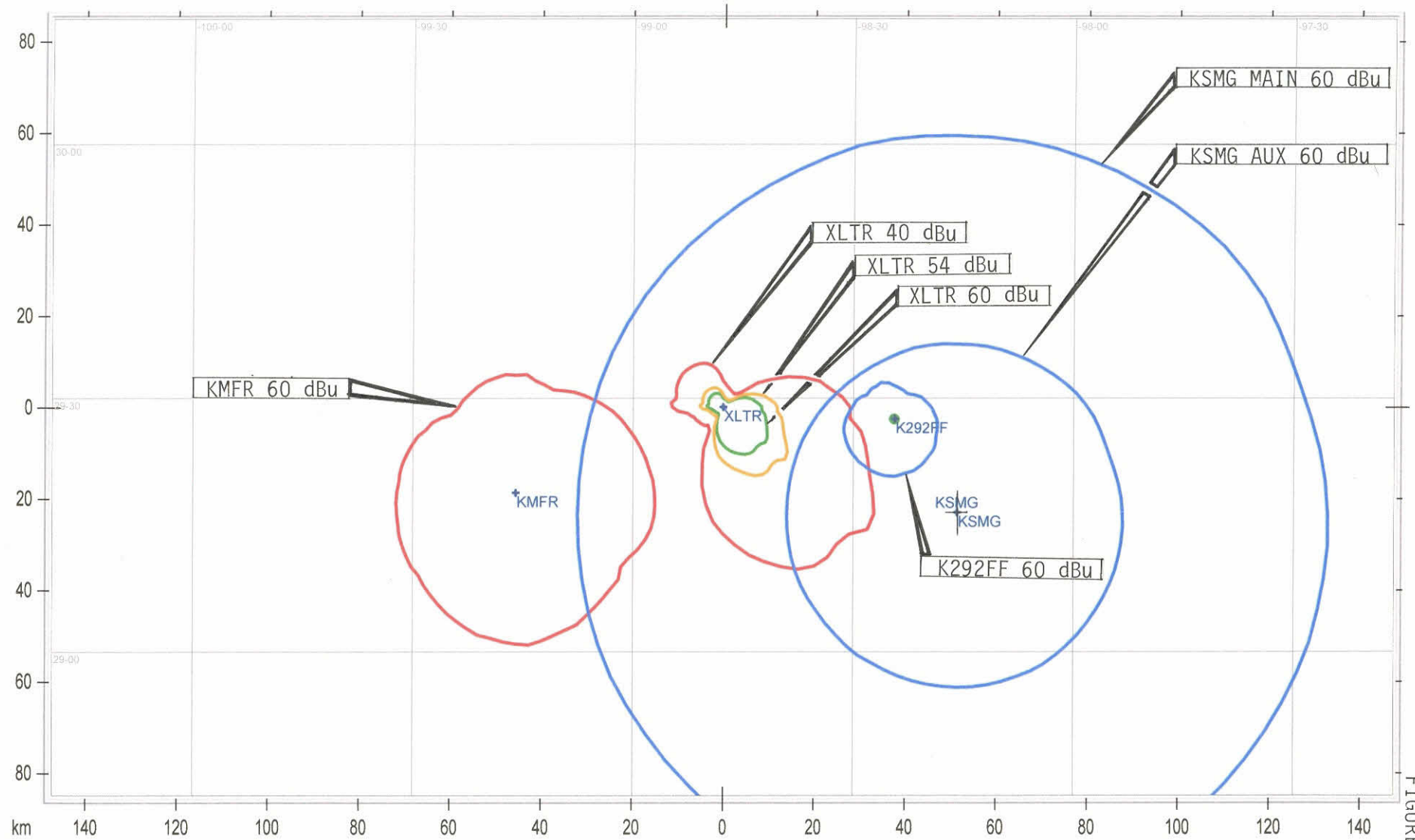


FIGURE 3A

Lackland, TX Ch290FT Translator Detailed Allocation Map

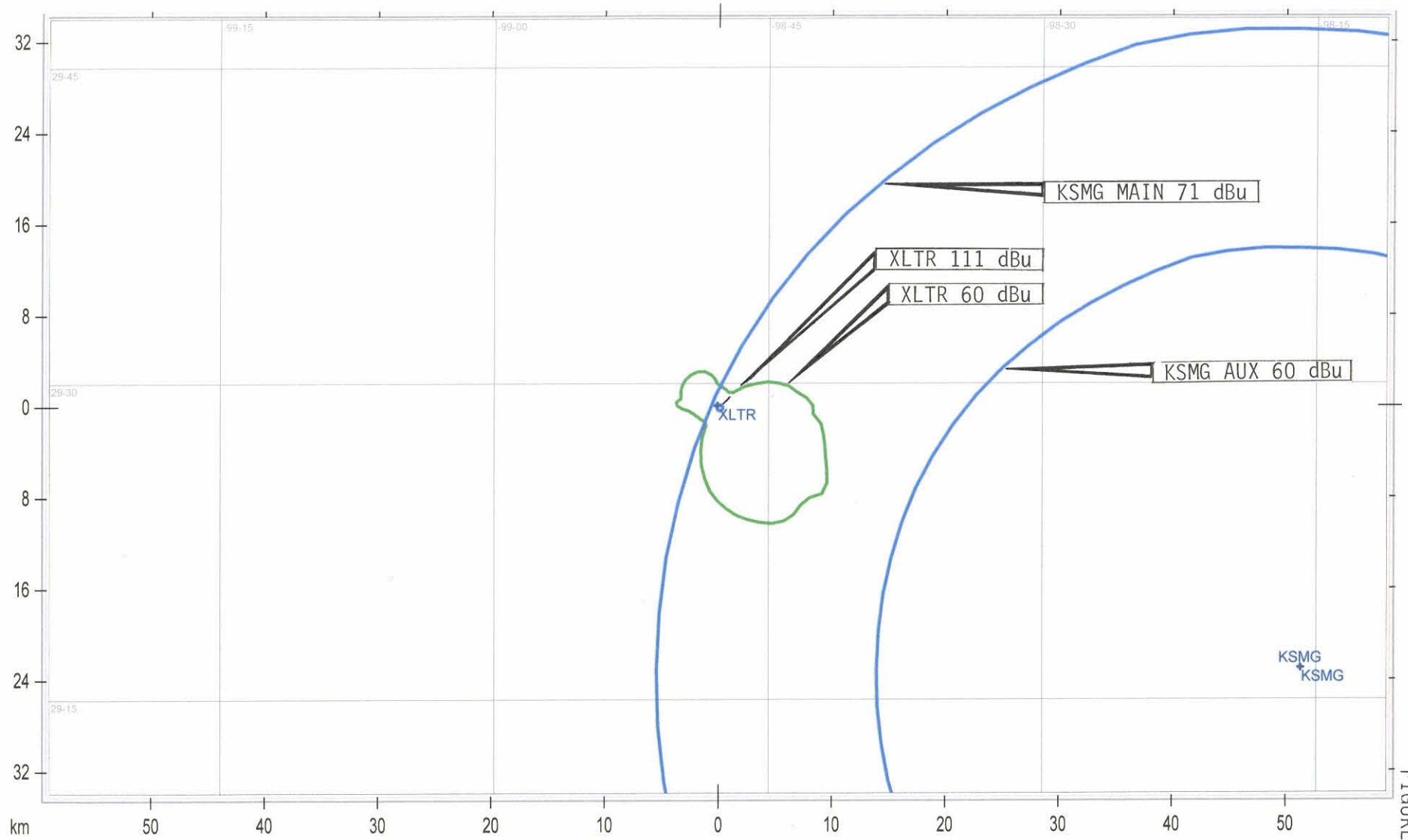


FIGURE 3B

Lackland, TX Ch290FT Translator 60 & 54 dBu Contours

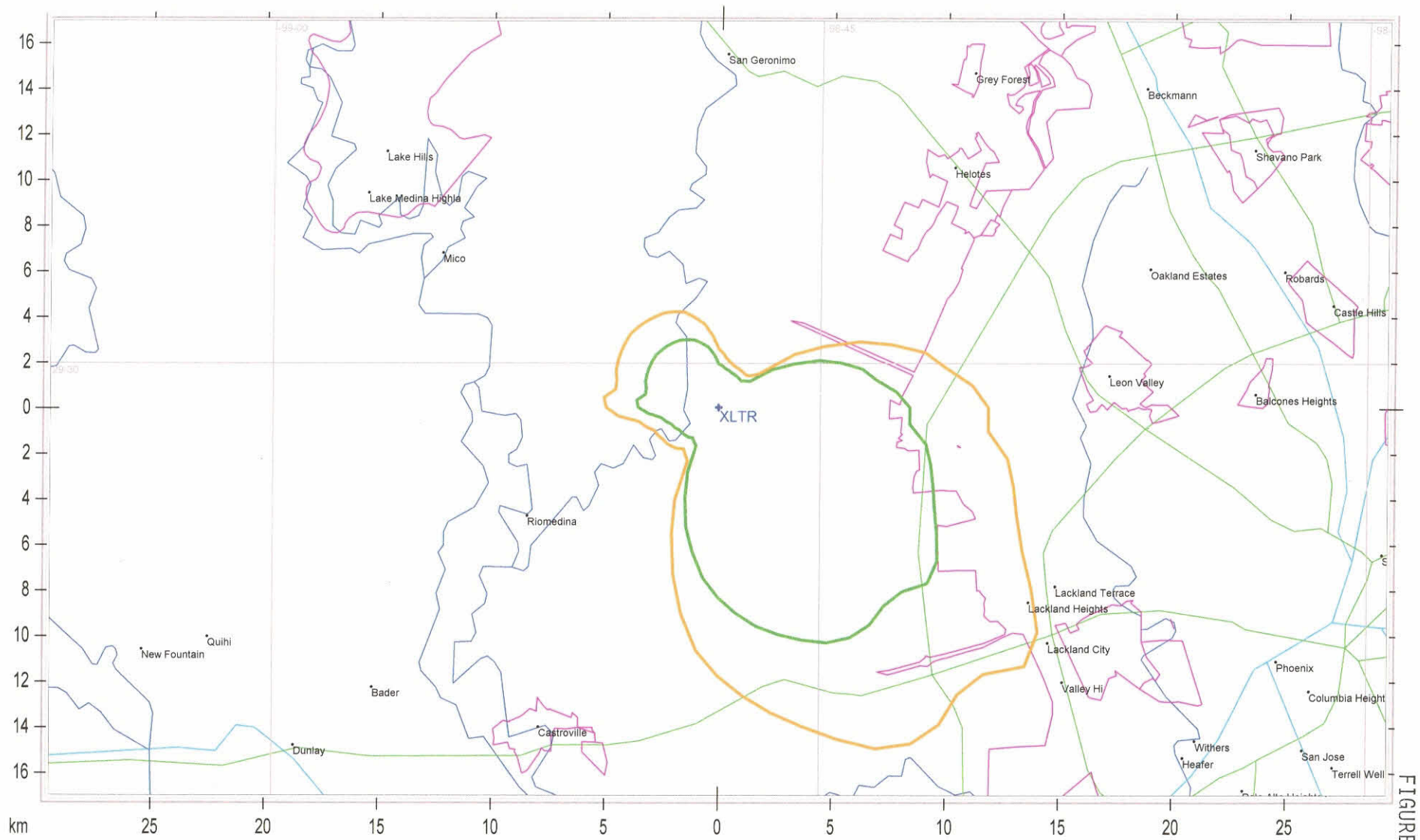


FIGURE 4