Addemen to Technical Narrative

AM FILL-IN TRANSLATOR APPLICATION TO MODIFY A CONSTRUCTION PERMIT

K226CZ (93.1 MHz)

BNPFT – 20171206ABY

FAITH AND POWER COMMUNICATIONS, INC

KLAR 1300 kHz
CLASS D
FACILITY ID 14656
BL-19991228AAV
LAREDO, TEXAS

CHANGES TO THE CP APPLICATION:

We are adding this additional statement with an exhibit to explain why we are requesting a change in the translator's output frequency.

This change is the result of Full Service Station KLIT Facility ID 86858 moving their transmitter site to another tower site, which is closer to Laredo, Texas. KLIT currently has a CP, file number BPH – 20190726AAO to construct new facilities. The additional exhibit shows that the translator's 54 db contour is overlapping the protected 60 db contour of KLIT. Should KLIT CP be licensed to cover, then the translator would create interference to KLIT. Channel 253 is the only other channel currently available in the Laredo, Texas area.

No other changes are being proposed.

Faith and Power Communications, Inc is submitting this minor change application to modify a construction permit, for an AM fill-in translator. Applicant was not able to lease the site where the original construction permit is specified. Applicant is requesting a frequency change from channel 226 (93.1) to a new frequency ch 253(98.5).

Proposed site is tower ASRN 1051406:

NAD(83)
27 – 31 – 13.0 N
99 – 31 – 20.0 W

Site Elevation – 126.3 meters
Tower Height – 292 meters

Proposed K226CZ

AGL – 100 meters

ERP – 0.050 kw (V) and (H)

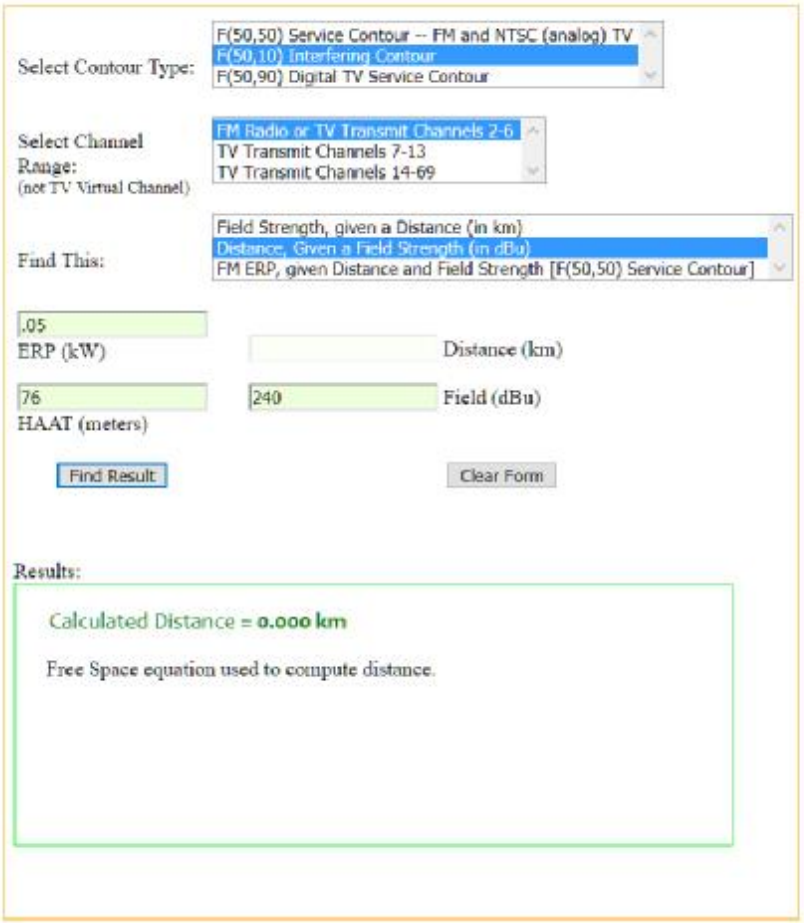
Directional Antenna – SCA CL – FMVH

MEXICO

Distance to US / Mexico Border is 2.5 km. This application is in compliance with the US/Mexico Treaty.

KRRG ch 251 facility ID 19544

Applicant is requesting a second adjacent channel wavier to KRRG ch 251.



KRRG F(50,50) contour at proposed site of translator, is in excess of 200 db.

Proposed K226CZ translator F(50,10) interfering contour is 240 db. FCC Graph program indicates the distance to this contour is 0 meters. Antenna RCAGL is 100 meters, thus the interfering contour remains on the tower where the antenna is mounted and thus will not reach ground level. Population inside the contour is zero persons. This proposal presents no interference to KRRG.

K281CB ch 253

Exhibit 13.1 Map showing this proposal will not cause interference to K281CB as the 40 db contour of proposed K226CZ does not enter or overlap the protected 60 contour of K281CB.

Exhibit 10 – AM Fill-in compliance map

Exhibit 12.0 – This Technical Narrative with listed exhibits

Exhibit 12.1 – Community Coverage

Exhibit 12.2 – K226CZ CP and proposed K226CZ 60 db contour overlap.

Exhibit 12.3 – Aerial Photo of proposed site

Exhibit 12.4 – Directional Antenna pattern and tabulations

Exhibit 12.5 – 34 db and 60 db contour map

Exhibit 12.6 – Distance to Contours table

Exhibit 13.0 – Overlap Requirements Channel Study

Exhibit 17 – Environment and RFE

This facility complies with the requirements 47 CFR 1.1306.

Antenna is a SCALA CL – FMHV directional antenna.

Worse Case Analysis

Power density can be calculated using the following formula:

$$S = \frac{33.4\,(F^2)\,ERP}{R^2}$$

where: S = power density in $\mu W/cm^2$

F = relative field factor (relative numeric gain)

ERP = power in watts

R = distance in meters

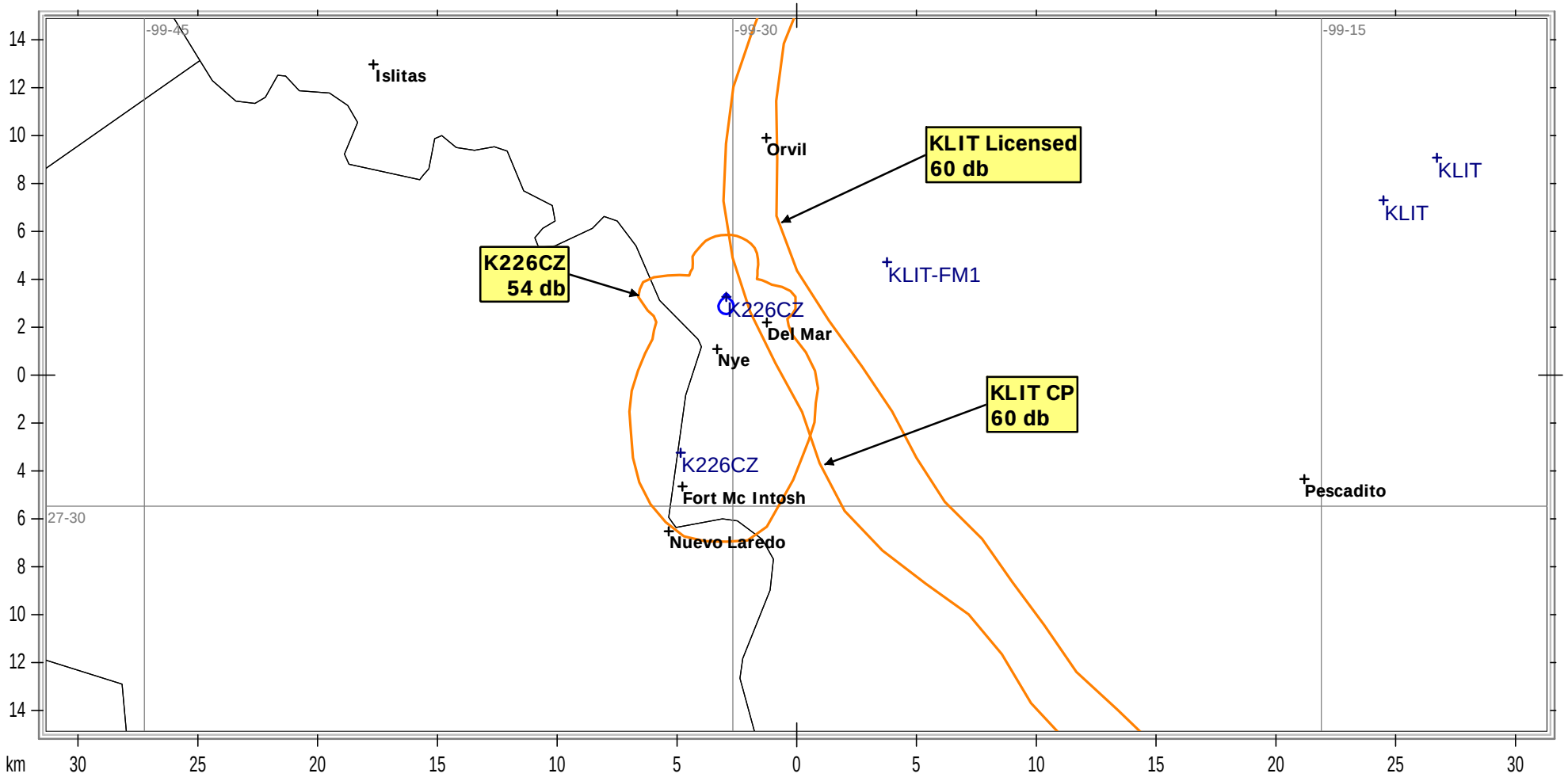
F = 1.0 relative field

ERP = 100 watts

R = 98 meters

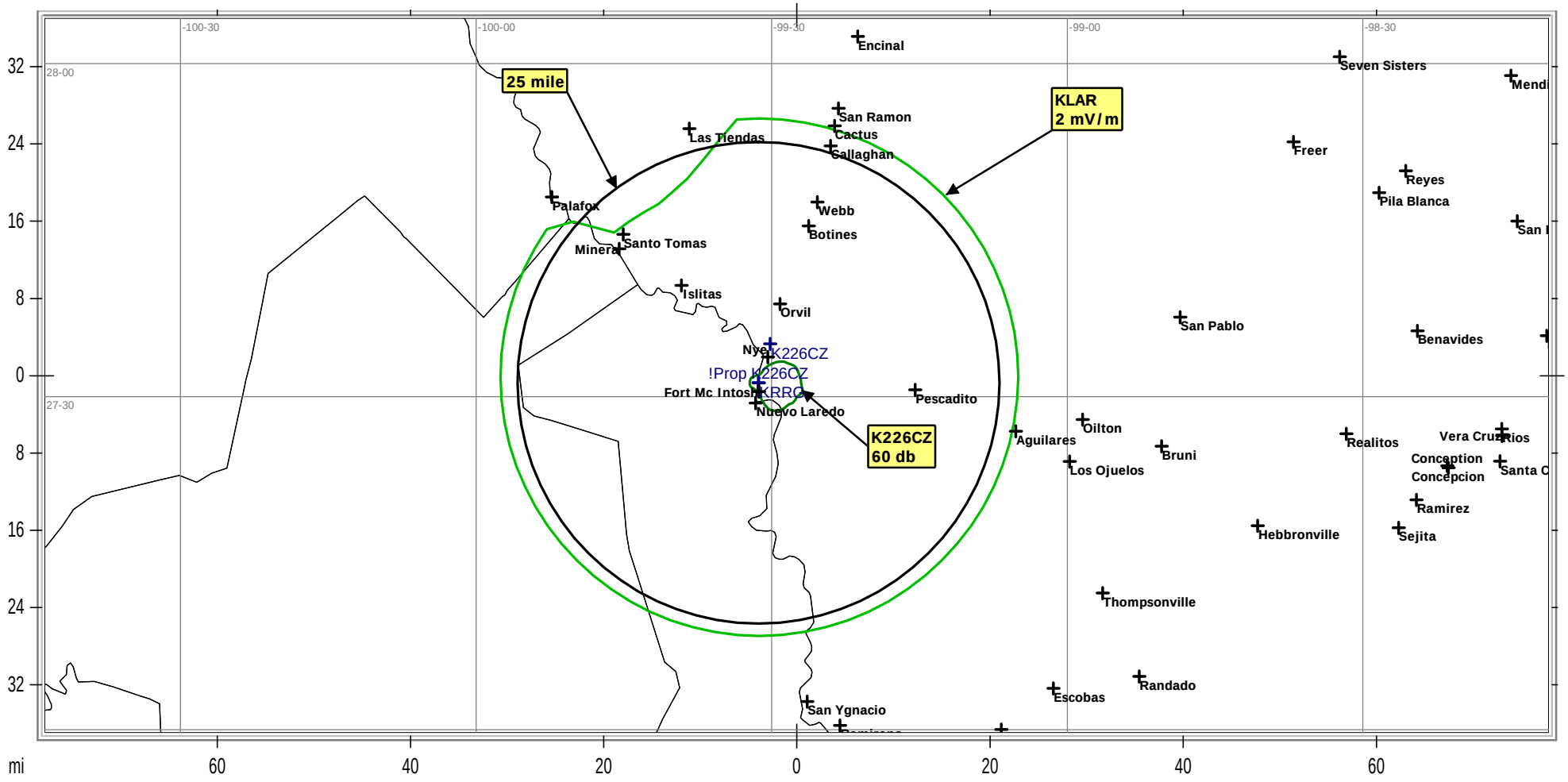
For this proposal, the calculated worse case power density is:

S = 0.35 $\mu W/cm^2$, or 0.18 % of uncontrolled public access limit of 200 $\mu W/cm^2$. This is less than 5% of the total allowable uncontrolled public access exposure of 200 $\mu W/cm^2$, therefore no further study is required. When workers are present on the tower, applicant will reduce power or cease transmission.

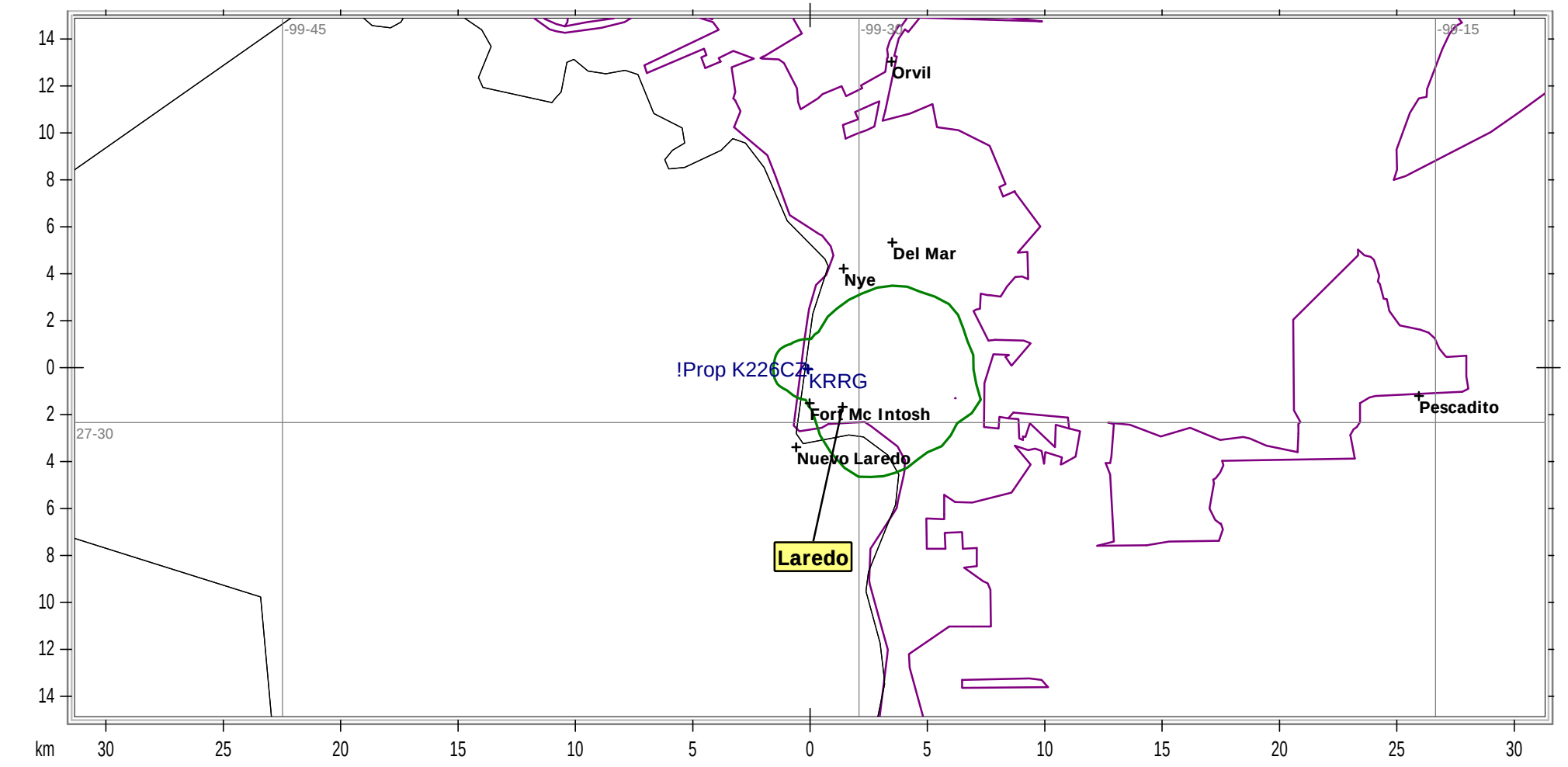


State Borders Lat/Lon Grid

New Channel 253 (98.5)

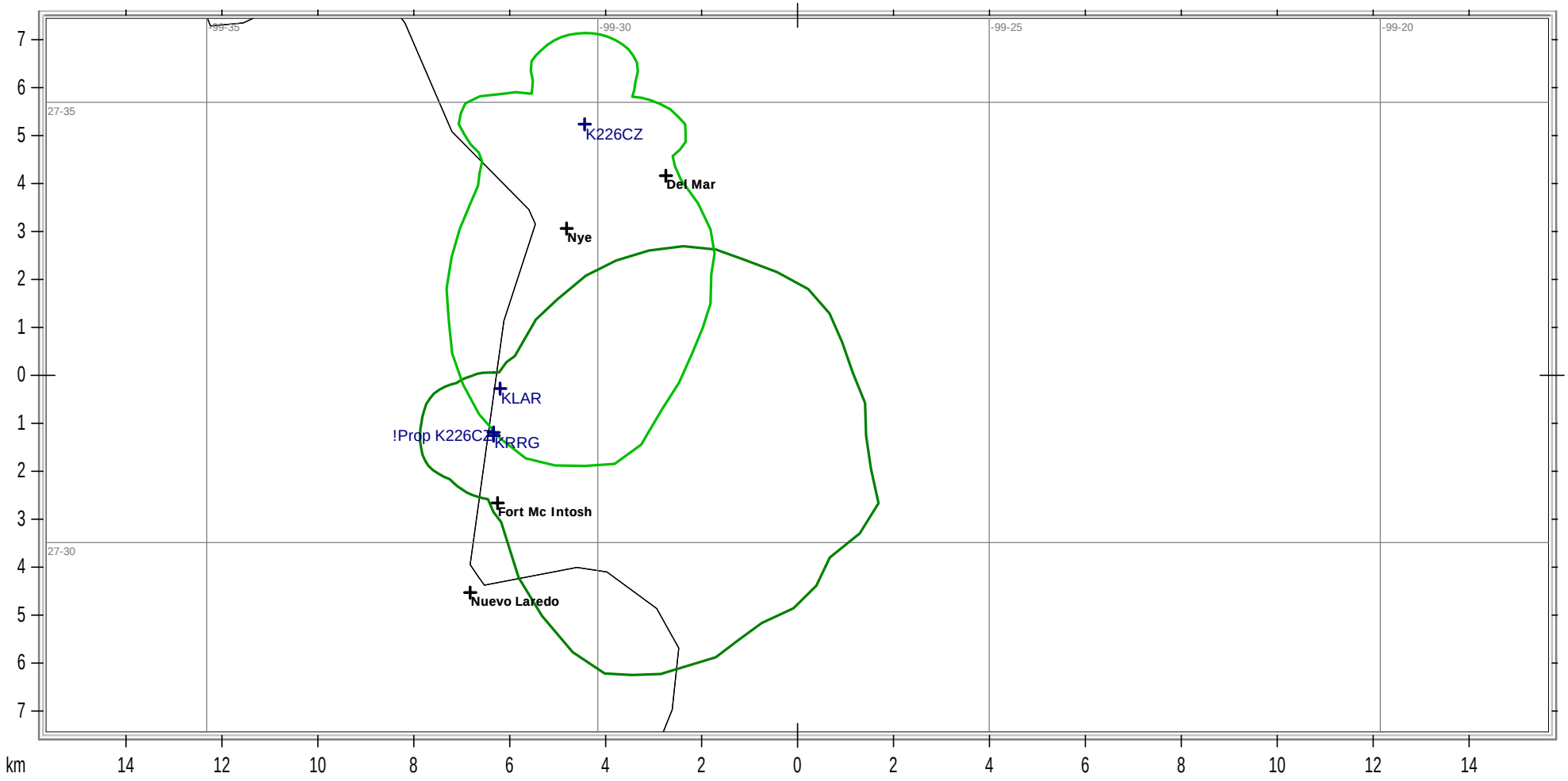


State Borders Lat/Lon Grid



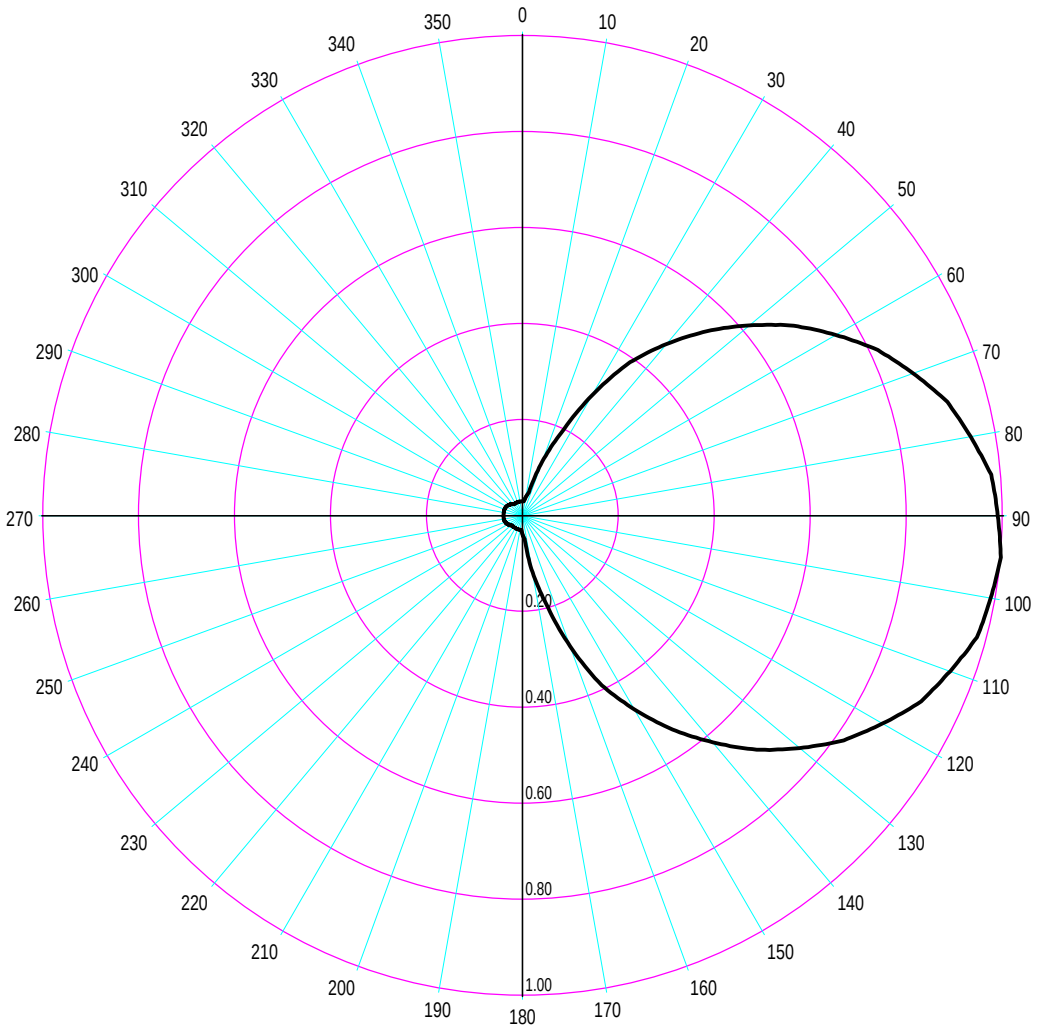
State Borders City Borders Lat/Lon Grid

New Channel 253 (98.5)



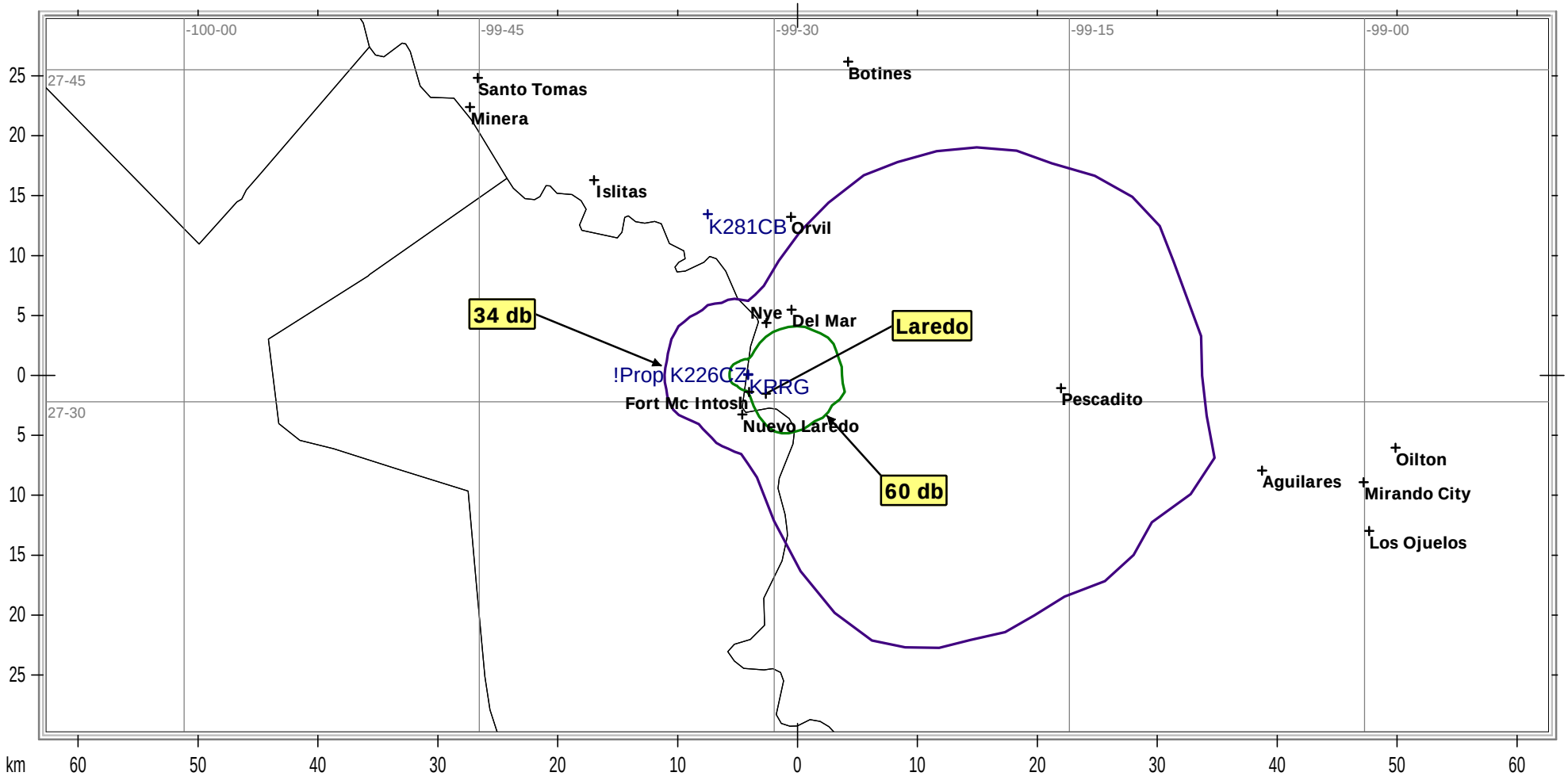
State Borders Lat/Lon Grid


AERIAL PHOTO
K226CZ on ASRN 1051406
EXHIBIT 12.3
Legend
1051406
Prop K226CZ
Shea St
Camp Ave
Anna Ave
1051406
Prop K226CZ
Google Earth
© 2020 Google
© 2020 Europa Technologies
© 2020 INEGI
100 m
N



Azim	Rel.FS	ERP [W]	dBk
0.0	0.030	0.045	-43.468
5.0	0.030	0.045	-43.468
10.0	0.040	0.080	-40.969
15.0	0.050	0.125	-39.031
20.0	0.120	0.720	-31.427
25.0	0.190	1.805	-27.435
30.0	0.290	4.205	-23.762
35.0	0.390	7.605	-21.189
40.0	0.467	10.904	-19.624
45.0	0.544	14.797	-18.298
50.0	0.617	19.034	-17.205
55.0	0.690	23.805	-16.233
60.0	0.753	28.350	-15.474
65.0	0.817	33.374	-14.766
70.0	0.866	37.498	-14.260
75.0	0.916	41.953	-13.772
80.0	0.948	44.935	-13.474
85.0	0.980	48.020	-13.186
90.0	0.990	49.005	-13.098
95.0	1.000	50.000	-13.010
100.0	0.990	49.005	-13.098
105.0	0.980	48.020	-13.186
110.0	0.948	44.935	-13.474
115.0	0.916	41.953	-13.772
120.0	0.866	37.498	-14.260
125.0	0.817	33.374	-14.766
130.0	0.753	28.350	-15.474
135.0	0.690	23.805	-16.233
140.0	0.617	19.034	-17.205
145.0	0.544	14.797	-18.298
150.0	0.467	10.904	-19.624
155.0	0.390	7.605	-21.189
160.0	0.290	4.205	-23.762
165.0	0.190	1.805	-27.435
170.0	0.120	0.720	-31.427
175.0	0.050	0.125	-39.031
180.0	0.040	0.080	-40.969

Azim	Rel.FS	ERP [W]	dBk
185.0	0.030	0.045	-43.468
190.0	0.030	0.045	-43.468
195.0	0.030	0.045	-43.468
200.0	0.030	0.045	-43.468
205.0	0.030	0.045	-43.468
210.0	0.030	0.045	-43.468
215.0	0.030	0.045	-43.468
220.0	0.030	0.045	-43.468
225.0	0.030	0.045	-43.468
230.0	0.032	0.051	-42.907
235.0	0.034	0.058	-42.381
240.0	0.036	0.065	-41.884
245.0	0.038	0.072	-41.415
250.0	0.039	0.076	-41.189
255.0	0.040	0.080	-40.969
260.0	0.040	0.080	-40.969
265.0	0.040	0.080	-40.969
270.0	0.040	0.080	-40.969
275.0	0.040	0.080	-40.969
280.0	0.040	0.080	-40.969
285.0	0.040	0.080	-40.969
290.0	0.040	0.080	-40.969
295.0	0.040	0.080	-40.969
300.0	0.039	0.076	-41.189
305.0	0.038	0.072	-41.415
310.0	0.036	0.065	-41.884
315.0	0.034	0.058	-42.381
320.0	0.032	0.051	-42.907
325.0	0.030	0.045	-43.468
330.0	0.030	0.045	-43.468
335.0	0.030	0.045	-43.468
340.0	0.030	0.045	-43.468
345.0	0.030	0.045	-43.468
350.0	0.030	0.045	-43.468
355.0	0.030	0.045	-43.468



State Borders Lat/Lon Grid

Exhibit 12.6

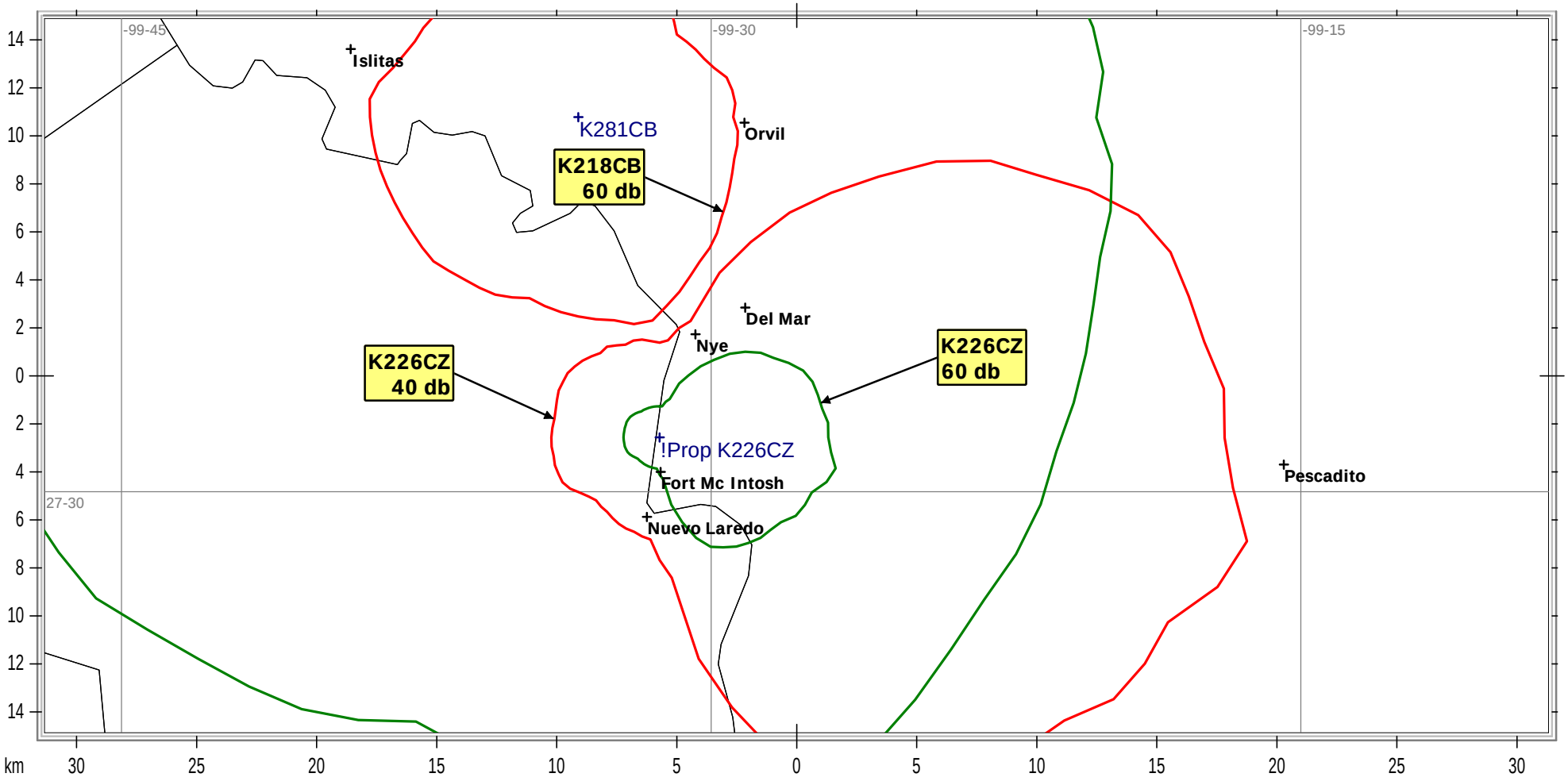
DISTANCE TO CONTOURS
K226CZ
On Channel 253

Azimuths	34 db	40 db	54 db	60 db	100 db
0	6.199	4.39	1.887	1.324	0.1
5	6.741	4.793	2.018	1.436	0.1
10	7.557	5.402	2.336	1.643	0.1
15	9.882	6.943	3.042	2.142	0.1
20	12.819	9.164	4.066	2.855	0.1
25	15.895	11.112	4.966	3.505	0.151
30	19.305	13.015	5.844	4.145	0.293
35	21.737	14.664	6.524	4.667	0.387
40	24.466	16.959	7.33	5.244	0.453
45	26.958	18.963	8.089	5.77	0.508
50	29.219	20.65	8.811	6.231	0.555
55	30.927	21.764	9.289	6.548	0.595
60	33.392	23.317	9.928	6.976	0.628
65	35.372	24.615	10.462	7.376	0.656
70	36.545	25.332	10.758	7.591	0.679
75	36.781	25.448	10.821	7.628	0.697
80	37.223	25.71	10.933	7.706	0.71
85	37.972	26.192	11.129	7.846	0.72
90	37.932	26.153	11.118	7.836	0.724
95	38.461	26.521	11.261	7.938	0.724
100	39.587	27.352	11.568	8.194	0.72
105	38.311	26.45	11.219	7.915	0.713
110	35.933	24.889	10.614	7.462	0.7
115	35.566	24.69	10.52	7.4	0.683
120	34.459	23.994	10.227	7.186	0.661
125	32.309	22.611	9.658	6.78	0.634
130	31.256	21.964	9.376	6.604	0.602
135	30.408	21.449	9.14	6.463	0.564
140	28.935	20.434	8.709	6.176	0.518
145	27.865	19.618	8.361	5.952	0.465
150	26.306	18.371	7.866	5.631	0.401
155	24.515	16.852	7.34	5.226	0.316
160	21.188	14.071	6.396	4.489	0.184
165	17.009	11.624	5.258	3.616	0.1
170	12.4	8.859	3.877	2.646	0.1
175	8.614	6.143	2.592	1.754	0.1
180	7.442	5.305	2.209	1.518	0.1
185	6.641	4.701	1.948	1.346	0.1
190	6.536	4.626	1.933	1.341	0.1
195	6.388	4.522	1.912	1.333	0.1
200	6.351	4.495	1.907	1.331	0.1
205	6.275	4.443	1.897	1.327	0.1
210	6.076	4.304	1.87	1.318	0.1
215	5.958	4.219	1.855	1.312	0.1
220	5.887	4.163	1.844	1.308	0.1

225	5.813	4.103	1.834	1.304	0.1
230	6.026	4.283	1.889	1.356	0.1
235	6.342	4.512	1.953	1.41	0.1
240	6.686	4.762	2.036	1.467	0.1
245	6.896	4.919	2.116	1.513	0.1
250	6.935	4.95	2.139	1.531	0.1
255	6.973	4.98	2.161	1.548	0.1
260	6.932	4.95	2.15	1.545	0.1
265	6.973	4.98	2.161	1.548	0.1
270	6.973	4.98	2.161	1.548	0.1
275	6.932	4.95	2.15	1.545	0.1
280	6.891	4.921	2.14	1.541	0.1
285	6.932	4.95	2.15	1.545	0.1
290	6.973	4.98	2.161	1.548	0.1
295	7.066	5.042	2.169	1.541	0.1
300	7.059	5.034	2.154	1.525	0.1
305	7.094	5.056	2.148	1.512	0.1
310	6.944	4.943	2.084	1.468	0.1
315	6.868	4.88	2.031	1.425	0.1
320	6.708	4.755	1.971	1.373	0.1
325	6.641	4.701	1.948	1.346	0.1
330	6.746	4.776	1.963	1.352	0.1
335	6.571	4.651	1.938	1.342	0.1
340	6.426	4.549	1.917	1.335	0.1
345	6.501	4.602	1.928	1.339	0.1
350	6.464	4.575	1.923	1.337	0.1
355	6.313	4.469	1.902	1.329	0.1

EXHIBIT 13
K229CZ
SEPARATION REQUIREMENTS

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
KRRG	**TX**	**LAREDO**	**98.1**	**251**	**100000**	**C1**	**LIC**	**0.06**	**0**	**-86.92 dB**
K281CB	TX	LAREDO NORTH	98.5	253	50	D	APP	13.83	0	-15.30 dB
KLMO-FM	TX	DILLEY	98.9	255	100000	C1	APP	159.45	0	28.99 dB
KLMO-FM	TX	DILLEY	98.9	255	92000	C1	LIC	159.45	0	30.41 dB
KOTX	TX	HEBBRONVILLE	98.7	254	1000	A	LIC	87.37	0	32.98 dB
KRYS-FM	TX	CORPUS CHRISTI	99.1	256	100000	C1	LIC	187.78	0	33.59 dB
KMJR	TX	ODEM	98.3	252	100000	C1	LIC	213.35	0	36.74 dB
KGBT-FM	TX	MCALLEN	98.5	253	100000	C	LIC	229.37	0	36.50 dB
XHRLFM	NL	MONTERREY	98.1	251	50000	B	CP	221.48	0	38.83 dB
KBBT	TX	SCHERTZ	98.5	253	98000	C1	LIC	235.39	0	38.04 dB
XHJDFM	NL	MONTERREY	98.9	255	50000	B	CP	221.2	0	39.15 dB



State Borders Lat/Lon Grid