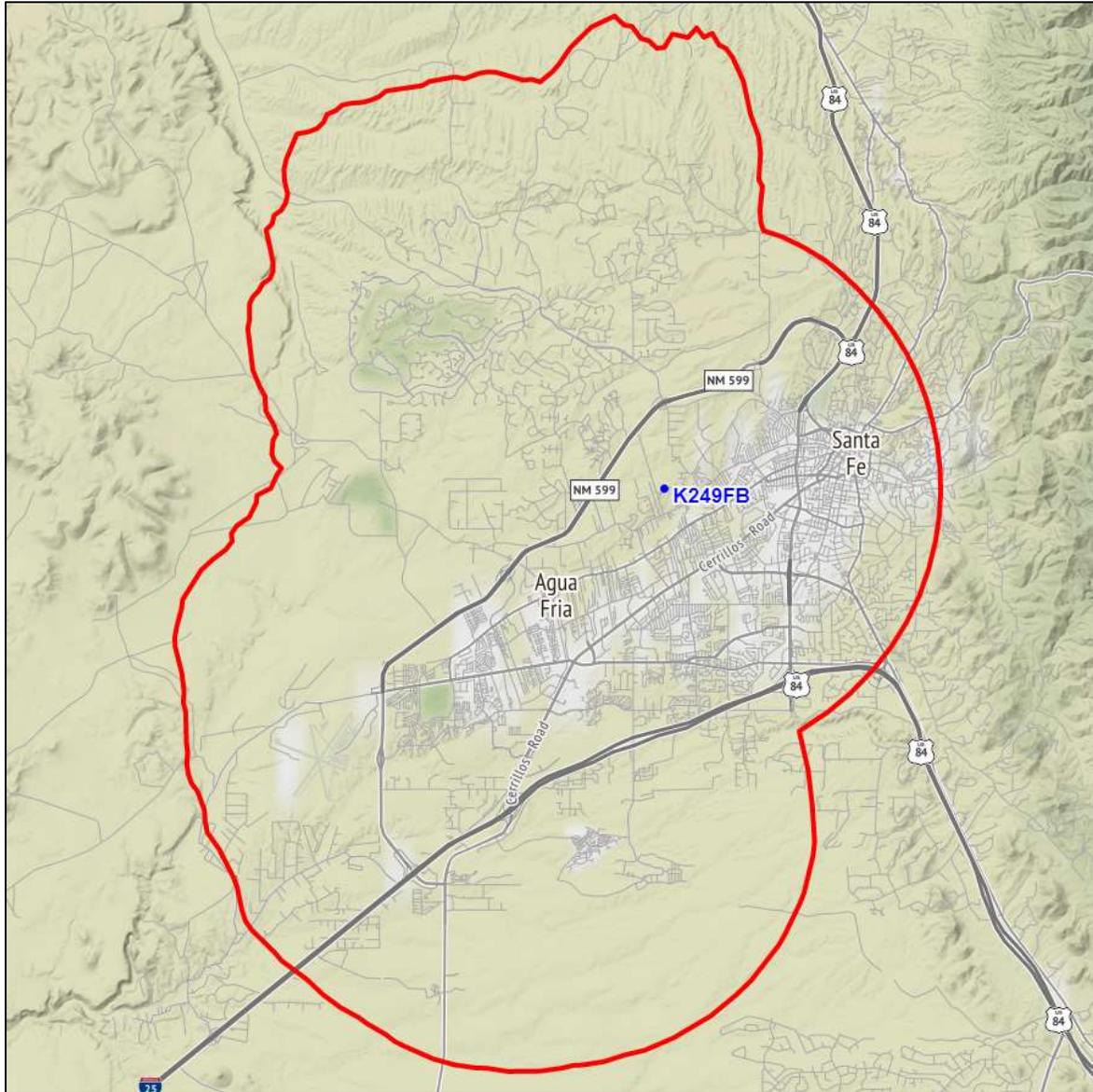




REC Networks/Michelle Bradley, CBT  
11541 Riverton Wharf Rd.  
Mardela Springs, MD 21837  
844.REC.LPFM/202.621.2355  
recnet.com

Minor modification to construction permit for K249FB  
BPFT-20190813AAG  
**HUTTON BROADCASTING, LLC**  
BLFT-20171226AAH

### PROPOSED 60dBu F(50,50) SERVICE CONTOUR



SANTA FE, NM – Channel 229D ~ 93.7 MHz ~ ERP 0.250 kW  
Elev: 2090 meters ~ RCAGL: 45 meters ~ RCAMSL: 2135 meters ~ HAAT: 30 meters  
Overall tower height: 58 meters – ASR: None (no nearby airports)  
NAD83 Latitude: 35° 40' 43.1" NL – Longitude: 105° 59' 30.0" WL  
NAD27 Latitude: 35° 40' 43.2" NL – Longitude: 105° 59' 27.9" WL  
All nearby AM stations are nondirectional and more than one wavelength distant.

Site: K249FB-A  
 Coordinates: 35-40-43.2 N, 105-59-27.9 W  
 Freq: 93.70000 MHz  
 ERP: 250.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	220.43	85	170	11.56	35.782660	-105.991083
5	227.05	86	200	11.70	35.783527	-105.979774
10	231.84	69	250	10.64	35.772876	-105.970609
15	236.68	54	250	9.53	35.761416	-105.963758
20	236.68	35	360	7.51	35.742138	-105.962619
25	241.57	6	490	7.03	35.735961	-105.958167
30	246.51	-21	590	7.07	35.733716	-105.951925
35	250.00	-51	890	7.09	35.730933	-105.945993
40	250.00	-94	1280	7.09	35.727542	-105.940554
45	246.02	-143	1240	7.06	35.723581	-105.935744
50	244.04	-167	1210	7.05	35.719400	-105.931270
55	244.04	-177	970	7.05	35.715010	-105.927127
60	244.04	-231	910	7.05	35.710344	-105.923471
65	244.04	-235	810	7.05	35.705437	-105.920330
70	241.57	-265	720	7.03	35.700268	-105.917927
75	241.57	-271	850	7.03	35.695006	-105.915889
80	241.57	-209	690	7.03	35.689621	-105.914425
85	241.57	-174	690	7.03	35.684152	-105.913544
90	241.57	-249	580	7.03	35.678642	-105.913253
95	241.57	-297	640	7.03	35.673132	-105.913554
100	241.57	-274	550	7.03	35.667664	-105.914446
105	241.57	-250	370	7.03	35.662280	-105.915920
110	241.57	-225	410	7.03	35.657021	-105.917966
115	241.57	-175	300	7.03	35.651927	-105.920569
120	241.57	-148	390	7.03	35.647037	-105.923707
125	244.04	-132	430	7.05	35.642289	-105.927185
130	244.04	-104	110	7.05	35.637904	-105.931331
135	244.04	-82	170	7.05	35.633829	-105.935931
140	244.04	-48	140	7.05	35.630095	-105.940950
145	246.02	-17	150	7.06	35.626612	-105.946249
150	250.00	10	100	7.09	35.623394	-105.951830
155	250.00	39	200	8.03	35.613170	-105.953519
160	246.51	59	180	10.04	35.593811	-105.953105
165	245.52	73	170	11.05	35.582669	-105.959457
170	241.57	90	170	12.13	35.571246	-105.967797
175	231.84	106	180	12.99	35.562300	-105.978568
180	222.31	118	210	13.56	35.556738	-105.991083
185	212.98	130	180	14.05	35.552784	-106.004620
190	202.50	145	190	14.72	35.548233	-106.019350
195	185.76	157	290	15.06	35.547810	-106.034175
200	172.22	170	470	15.46	35.548002	-106.049529
205	158.80	180	400	15.59	35.551543	-106.063931
210	142.88	186	200	15.40	35.558688	-106.076210
215	133.59	191	210	15.32	35.565738	-106.088257
220	122.15	198	170	15.23	35.573682	-106.099340
225	114.24	198	210	14.96	35.583471	-106.108067
230	106.60	194	250	14.57	35.594384	-106.114514
235	98.60	194	300	14.28	35.604912	-106.120515
240	93.02	187	350	13.84	35.616366	-106.123667
245	88.21	179	400	13.40	35.627671	-106.125431
250	84.10	173	430	13.01	35.638578	-106.126353
255	81.51	161	390	12.44	35.649629	-106.124108
260	79.24	144	410	11.63	35.660431	-106.117907
265	77.84	125	400	10.78	35.670154	-106.110025
270	76.73	110	450	10.12	35.678615	-106.103195
275	76.45	105	670	9.89	35.686372	-106.100209
280	76.73	113	780	10.26	35.694633	-106.102943
285	77.84	124	740	10.74	35.703623	-106.106032
290	79.24	134	750	11.20	35.713077	-106.107711
295	81.51	136	760	11.37	35.721825	-106.105227
300	84.97	138	900	11.57	35.730644	-106.102094
305	88.21	144	840	11.93	35.740160	-106.099366
310	93.02	154	940	12.54	35.751114	-106.097539
315	98.60	155	990	12.76	35.759773	-106.091083
320	106.60	143	1010	12.45	35.764416	-106.079791
325	116.28	128	590	12.01	35.767093	-106.067413
330	124.61	121	580	11.89	35.771280	-106.056999
335	136.16	108	330	11.53	35.772660	-106.045112
340	145.92	93	310	10.92	35.770947	-106.032483
345	166.06	88	290	10.97	35.773961	-106.022556
350	181.90	94	290	11.57	35.781193	-106.013368
355	201.15	89	200	11.55	35.782183	-106.002247

## NON-ADJACENT CHANNEL CHANGE

K249FB(A)  
Santa Fe, NM  
Channel 229D (93.7 MHz)

K249FB is currently licensed on Channel 249D with 0.25 kW into a directional antenna. On September 10, 2019, application was granted construction permit BPFT-20190813AAG to change to Channel 288D with a limitation of 0.099 kW due to an intermediate frequency.

In the instant application, applicant seeks to specify Channel 229D at 0.25 kW in lieu of Channel 288D at 0.099 kW.

On Channel 249D, K249FB was inside the 40 dBu F(50, 10) interfering contour of co-channel full-service station KLVO, Belen, New Mexico. KLVO places a 49.5 dBu interfering contour at the K249FB site.

In the previously granted modification to Channel 288D, K249FB would have received in incoming interfering contour of 48.5 dBu from KQRI, Bosque Farms, New Mexico, thus resulting in reduced interference from the licensed facility.

On Channel 229D, K249DB would be outside the appropriate interfering contours of all nearby full-service and FM translator facilities.

While LPFM requires a positive showing of reduced interference, §74.1233(a)(1)(i)(2) only requires, for FM Translators, a showing of the presence of interference to or from any other broadcast station in order to make a remedial change to any frequency, this instant modification of the previously granted construction permit reduces incoming interference even further, thus assuring a better listening experience for listeners of all stations involved and thus is in the public interest.<sup>1</sup>

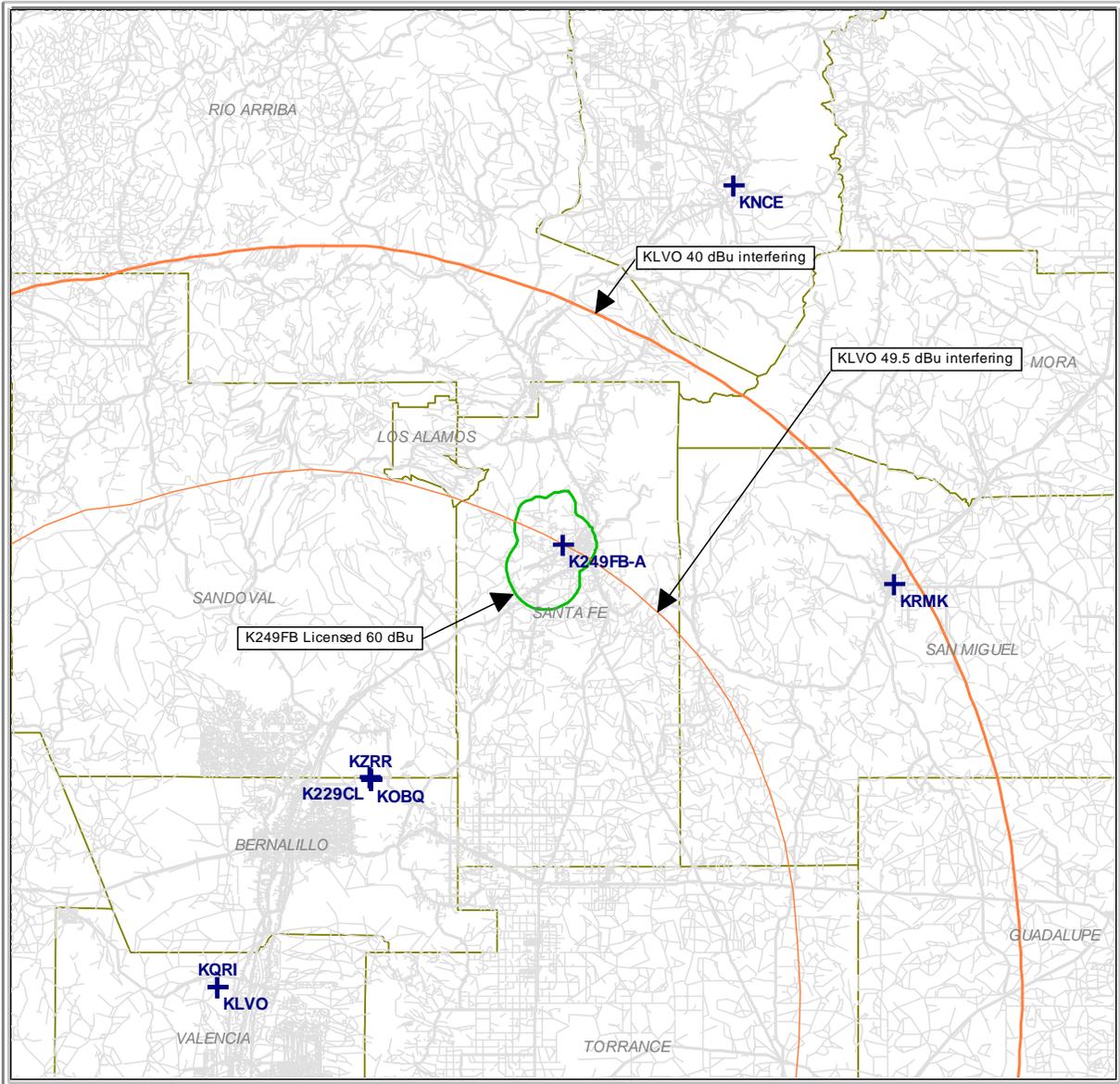
For those reasons, the applicant is requesting a non-adjacent channel change pursuant to §74.1233(a)(1)(i)(2).

Prepared by,  
Michelle Bradley, CBT  
REC Networks  
April 13, 2021

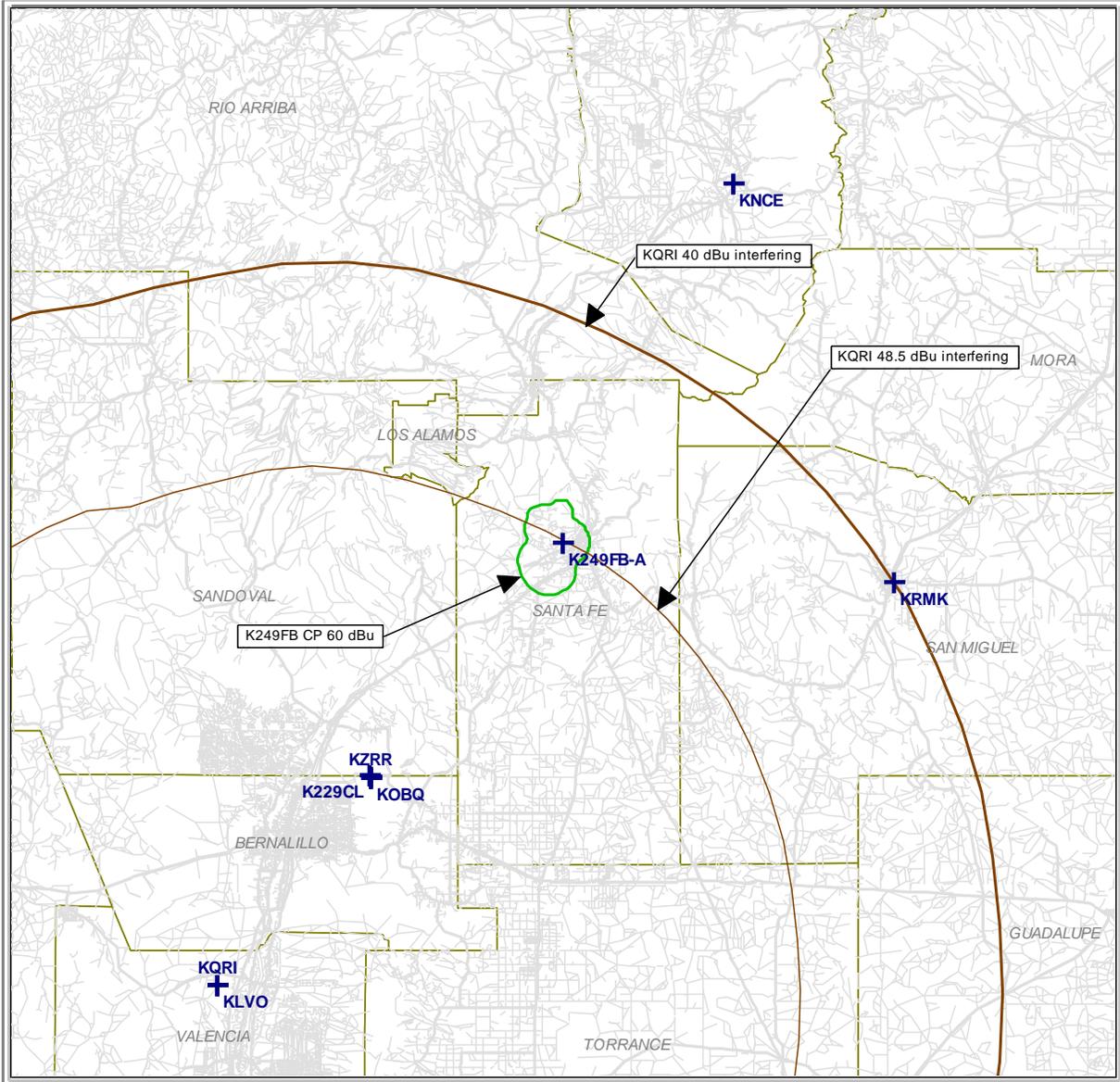
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<sup>1</sup> 47 C.F.R. §73.870(a) (for LPFM), *comp.* 47 C.F.R. §74.1233(a)(1)(i)(2) (for FM Translators).

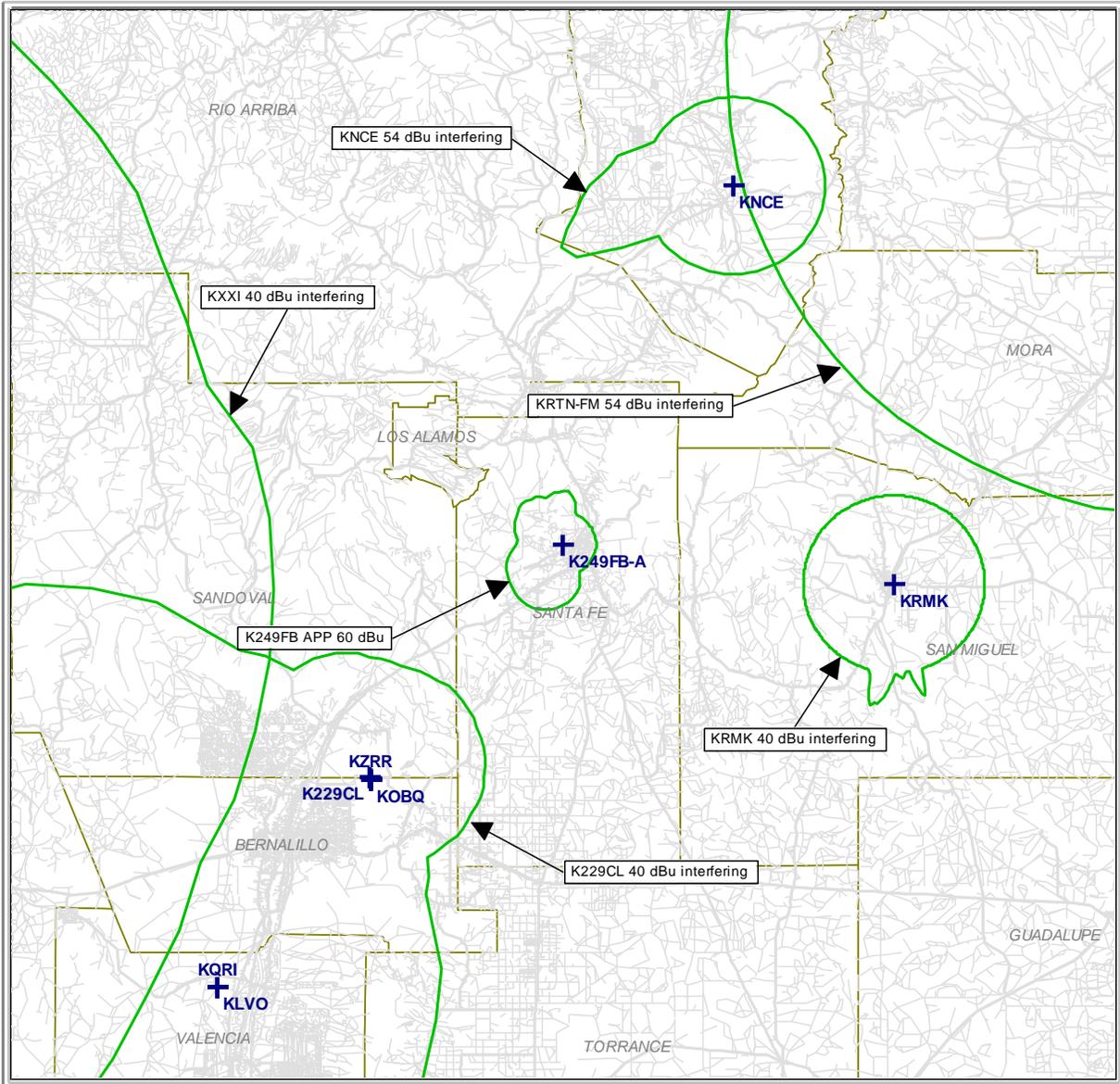
### K249FB Licensed Facility - inward interference



### K249FB Granted CP Facility - inward interference



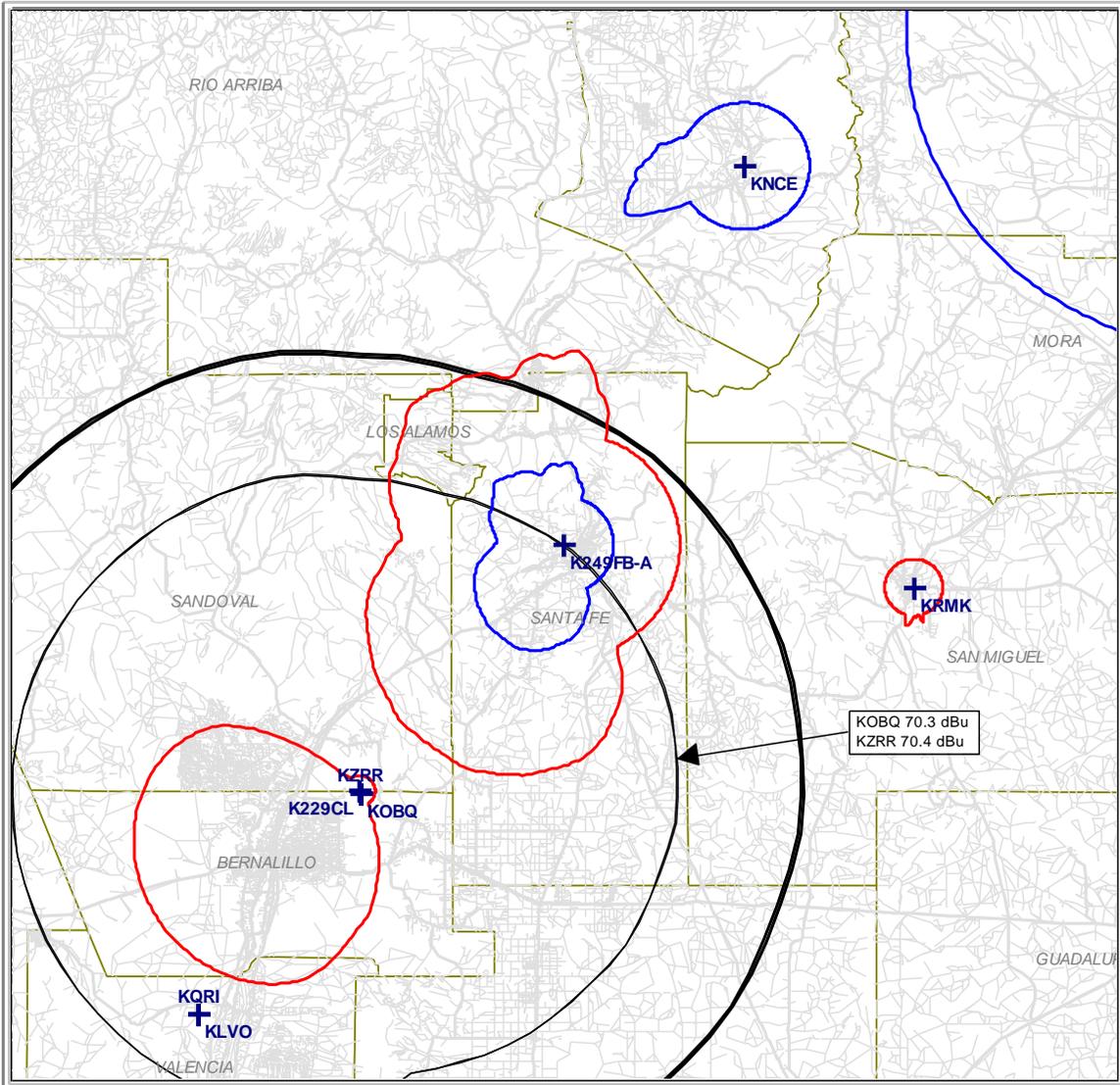
### K249FB Instant Application Facility - inward interference



ComStudy 2.2 search of channel 229 (93.7 MHz Class D) at 35-40-43.2 N, 105-59-27.9 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
KOBQ	ALBUQUERQUE	NM	227	C	66.47	0.00	218.8	-10.65 dB
KNCE	TAOS	NM	228	A	86.91	0.00	24.6	25.28 dB
KRMK	LAS VEGAS	NM	229	A	71.89	0.00	96.8	13.34 dB
K229CL	ALBUQUERQUE	NM	229	D	66.17	0.00	219.2	4.91 dB
KXXI	GALLUP	NM	229	C0	244.63	0.00	268.9	33.81 dB
KRTN-FM	RATON	NM	230	C1	180.42	0.00	51.3	31.79 dB
KZRR	ALBUQUERQUE	NM	231	C	66.41	0.00	218.8	-10.88 dB

### K249FB Instant Application Facility - interference protection



Red (co-channel 40->60), Blue (first adjacent 54->60), Black (second/third adj 100->60)

**WAIVER OF §74.1204(a) REQUEST**  
**OVERLAPPING SECOND ADJACENT CHANNELS**

K249FB(A)  
Santa Fe, NM  
Channel 229D (93.7 MHz)

The proposed facility (“K249FB(A)”) is located within the 60 dBu protected service contours of second-adjacent channel facilities KOBQ and KZRR, both Albuquerque, New Mexico.

KOBQ operates 21.5 kW into a nondirectional antenna at 1265 meters height above average terrain (HAAT) on Channel 227C. KOBQ places a 70.3 dBu service contour at K249FB(A).

KZRR operates 22.5 kW into a nondirectional antenna at 1259 meters HAAT on Channel 231C. KZRR places a 70.4 dBu service contour at K249FB(A).

When evaluating multiple overlapping stations, we further review the weaker of the two stations as the interfering contour of the stronger station would be fully contained in the weaker station. In this case, we will further evaluate KOBQ.

Using the U/D method<sup>2</sup>, the proposed translator station is predicted to produce an undesired interference overlap in respect to KOBQ to the proposed translator station’s 110.3 dBu interference contour (“overlap zone”). At 250 watts ERP, the overlap zone extends to 339 meters from the radiation center. A small number of single-story occupied structures exist within the overlap zone. To address this interference, K249FB(A) proposes operation on Channel 239D utilizing their existing 6-bay Nicom BKG-77/88 circular polarized antenna, rotated at 95 degrees at 45 meters above ground level. Based on the manufacturer’s specifications for this antenna, the interfering contour of the proposed facility will not exceed 108.09 dBu at any point 6 meters (20 feet) above ground level, well above the heights of the occupied structures.

Based on these findings, the proposed modified FM translator will not create any interference to listeners or potential listeners of KOBQ or KZRR. The applicant is requesting a waiver of §74.1204(a) in respect to second and third-adjacent channel short-spaced stations KOBQ and KZRR, both Albuquerque, New Mexico.

Prepared by  
Michelle Bradley, CBT  
REC Networks  
April 13, 2021

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<sup>2</sup> - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

Proposed Power:	<b>0.25 kW</b>
Antenna Height AGL:	<b>45 m</b>
Interference Contour:	<b>110.3 dBu</b>
Artificial RX Antenna Height:	<b>6 m</b>
Antenna Type:	<b>Nicom BKG77 - 6 bay 0.85 wave spacing</b>

Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant to Interference Contour	Distance from Ant to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant to Ground Level	Field Strength in dBu @ Ground Level
5	<b>0.679</b>	0.115	-9.38	230.06	447.47	104.52	516.32	103.28
10	<b>0.068</b>	0.001	-29.37	23.04	224.59	90.52	259.14	89.28
15	<b>0.229</b>	0.013	-18.82	77.59	150.68	104.53	173.87	103.29
20	<b>0.088</b>	0.002	-27.13	29.82	114.03	98.65	131.57	97.41
25	<b>0.124</b>	0.004	-24.15	42.01	92.28	103.47	106.48	102.22
30	<b>0.116</b>	0.003	-24.73	39.30	78.00	104.35	90.00	103.10
35	<b>0.040</b>	0.000	-33.98	13.55	67.99	96.29	78.46	95.05
40	<b>0.123</b>	0.004	-24.22	41.67	60.67	107.04	70.01	105.79
45	<b>0.064</b>	0.001	-29.90	21.68	55.15	102.19	63.64	100.95
50	<b>0.048</b>	0.001	-32.40	16.26	50.91	100.39	58.74	99.15
55	<b>0.109</b>	0.003	-25.27	36.93	47.61	108.09	54.93	106.85
60	<b>0.092</b>	0.002	-26.74	31.17	45.03	107.10	51.96	105.86
65	<b>0.034</b>	0.000	-35.39	11.52	43.03	98.85	49.65	97.61
70	<b>0.022</b>	0.000	-39.17	7.45	41.50	95.39	47.89	94.14
75	<b>0.055</b>	0.001	-31.21	18.64	40.38	103.58	46.59	102.34
80	<b>0.063</b>	0.001	-30.03	21.35	39.60	104.93	45.69	103.69
85	<b>0.062</b>	0.001	-30.17	21.01	39.15	104.89	45.17	103.65
90	<b>0.062</b>	0.001	-30.17	21.01	39.00	104.93	45.00	103.68

**CROSS-SERVICE FILL-IN COVERAGE**

