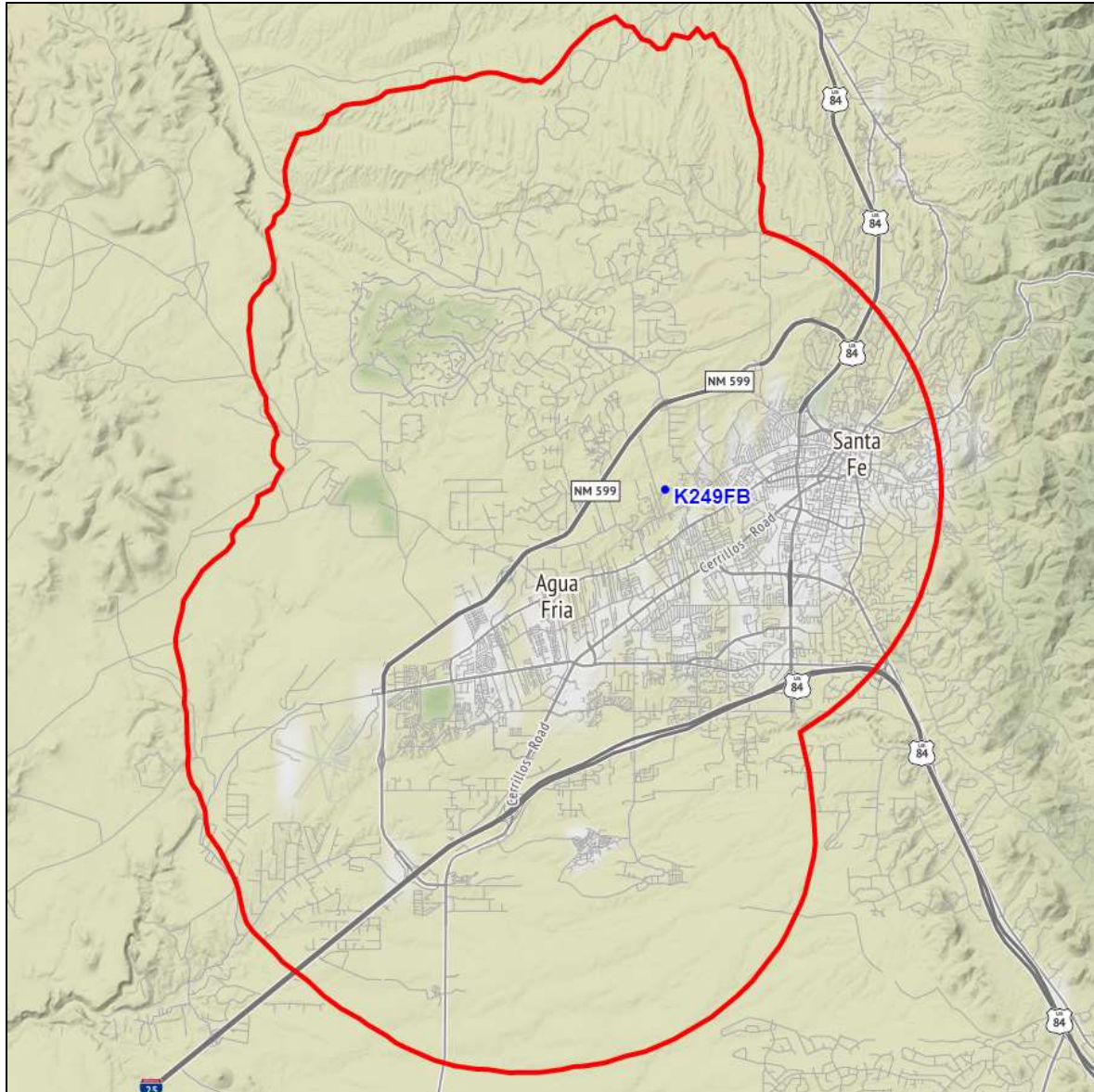




REC Networks/Michelle Bradley, CBT
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

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.

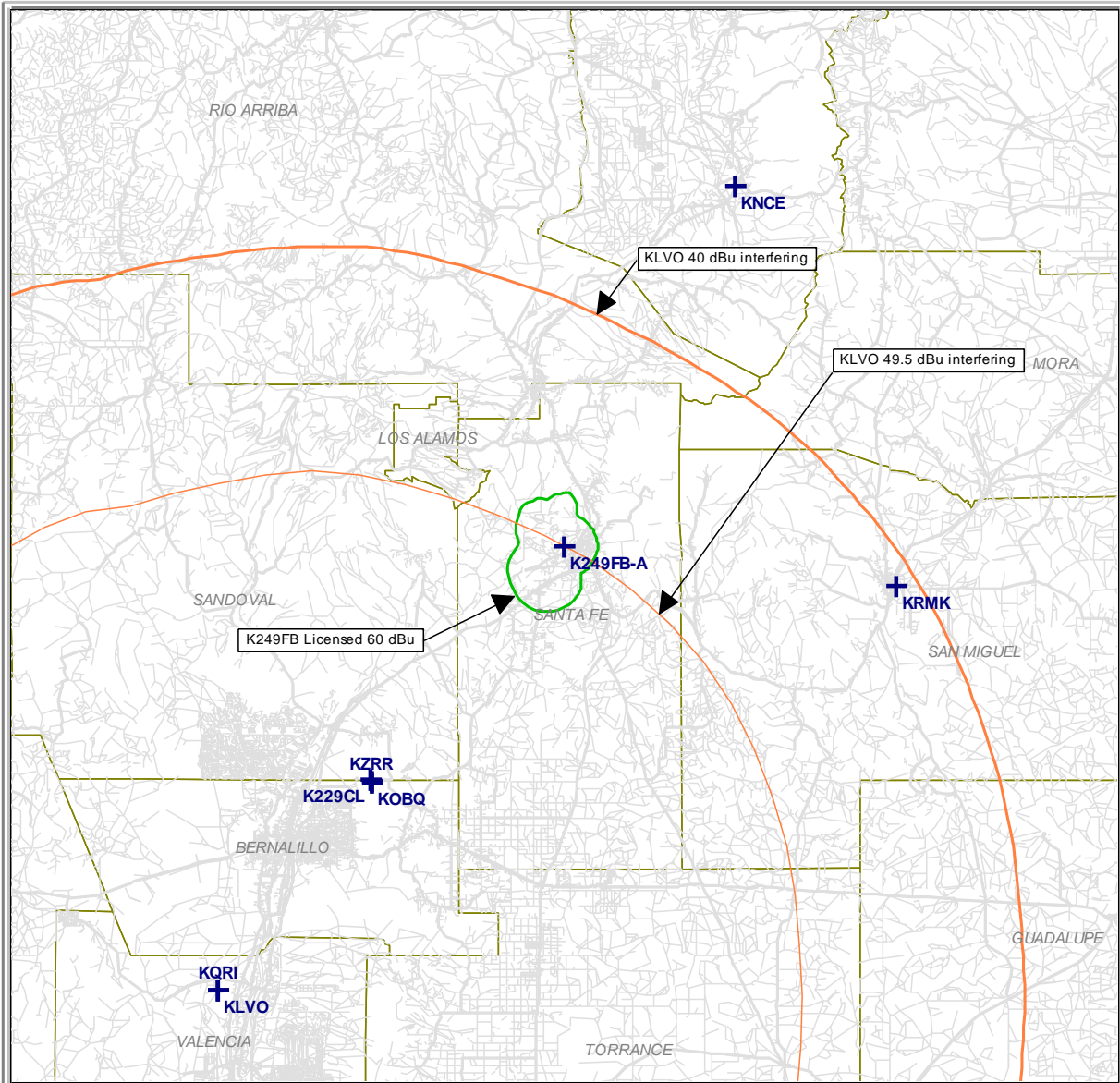
While LPFM requires a positive showing of reduced interference, §74.1233(a)(1)(i)(2) only requires, for FM Translators, a showing of the presence of interference to or from any other broadcast station in order to make a remedial change to any frequency, this instant modification of the previously granted 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.¹

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

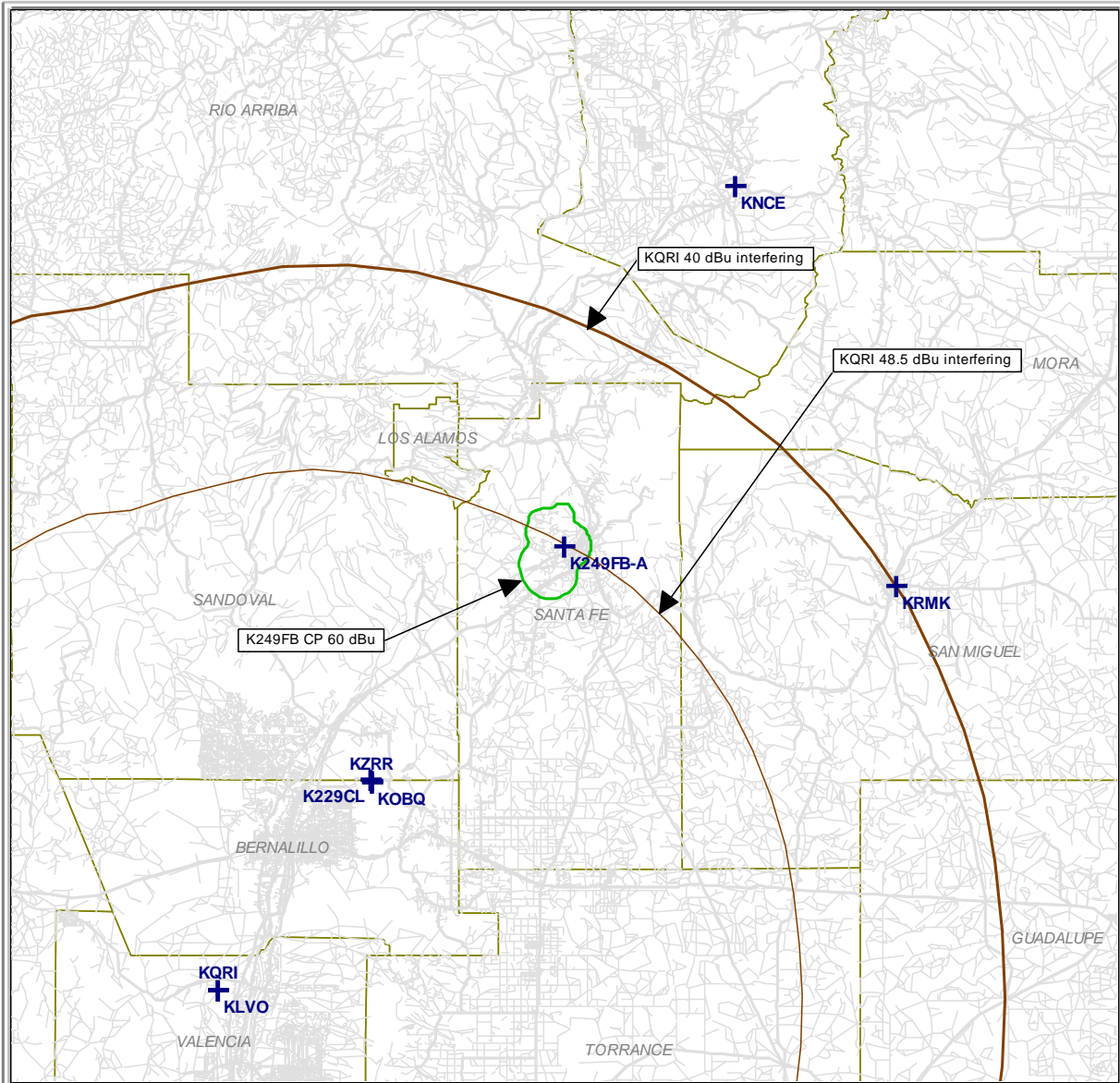
Prepared by,
Michelle Bradley, CBT
REC Networks
April 13, 2021

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

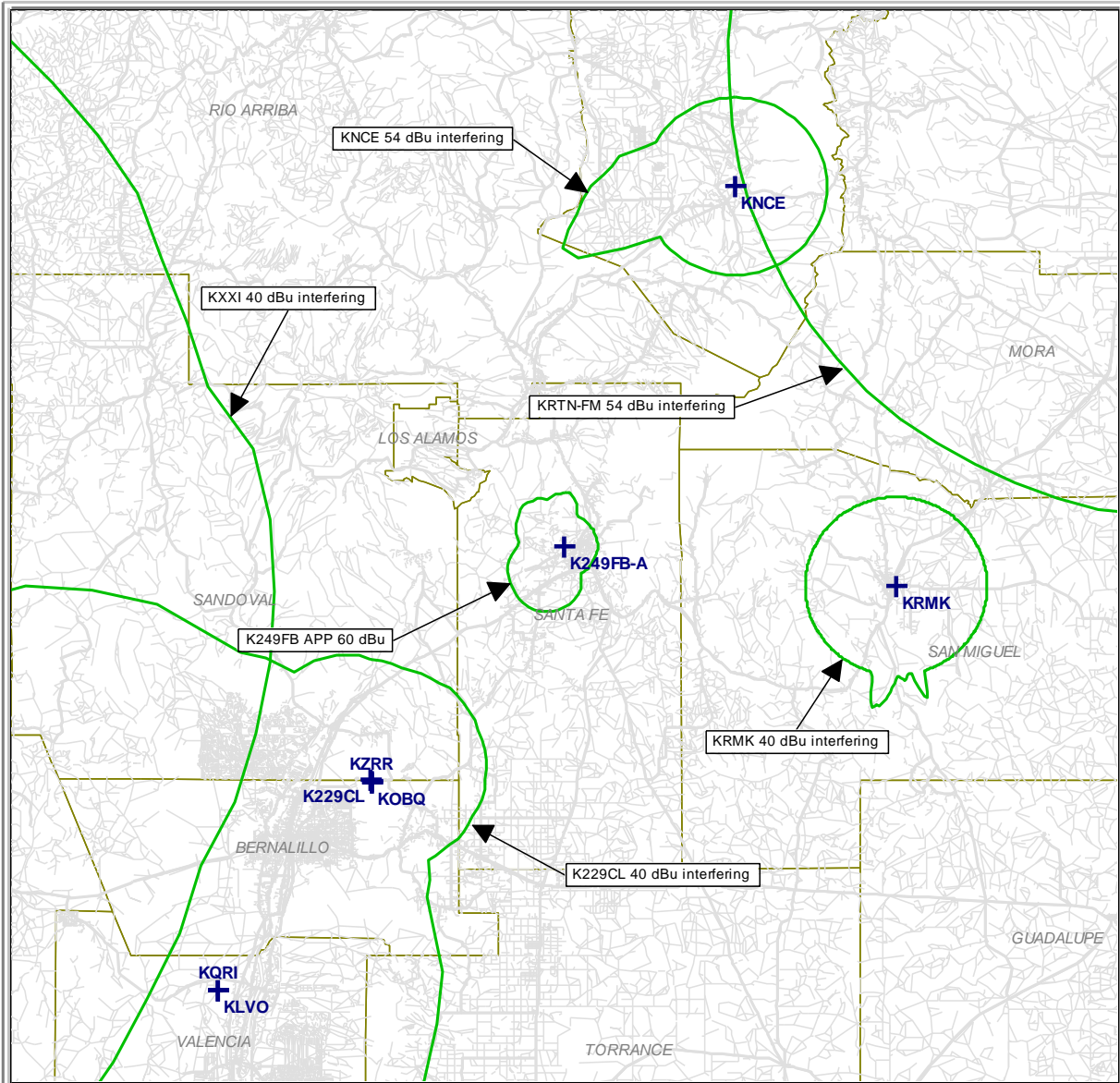
K249FB Licensed Facility - inward interference



K249FB Granted CP Facility - inward interference



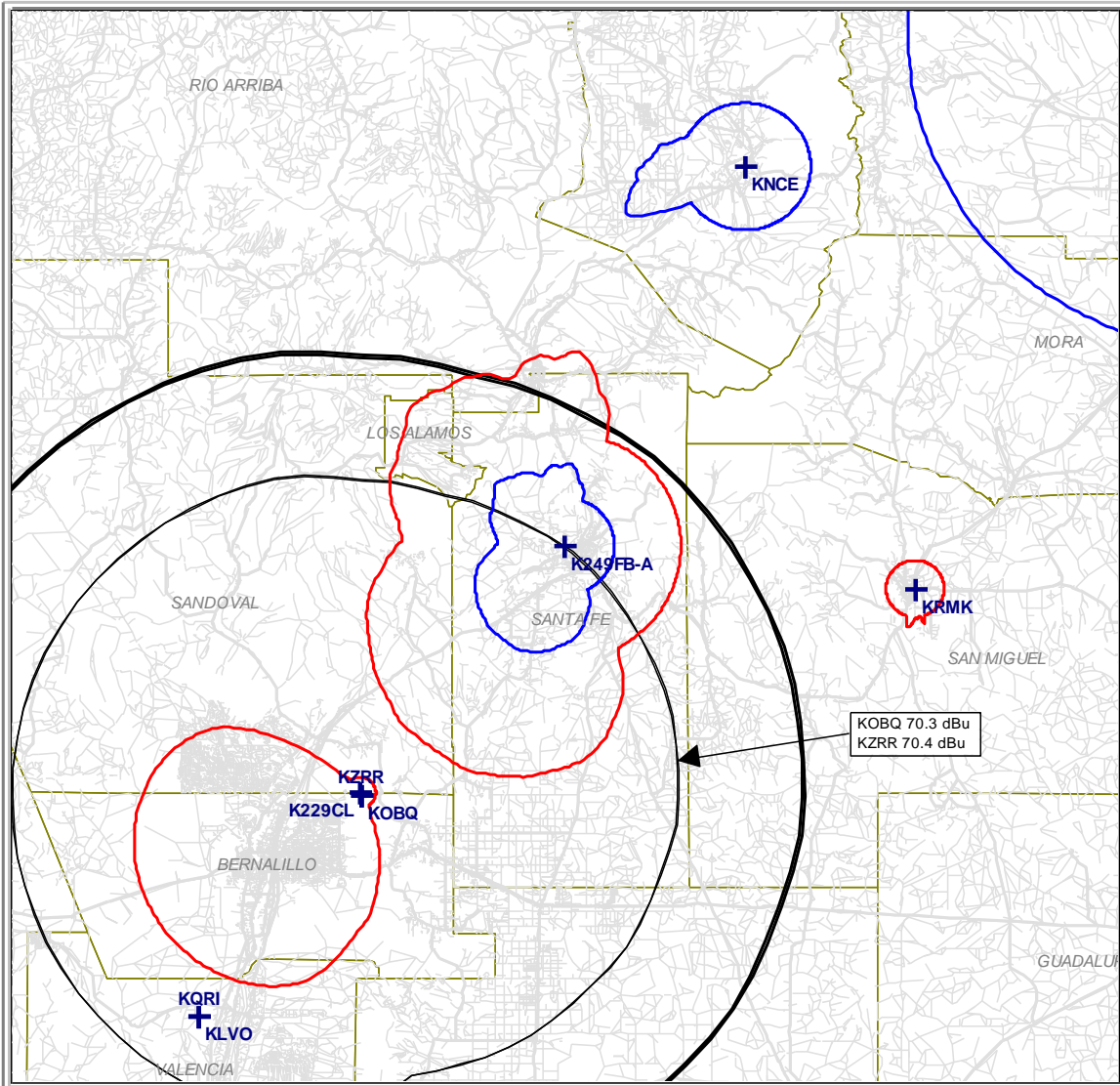
K249FB Instant Application Facility - inward interference



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 method², 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

² - 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: | | | | 0.25 kW | | | | |
|-------------------------------|------------------------|-----------|------------|---|---------------------------------------|--|-----------------------------------|--------------------------------------|
| Antenna Height AGL: | | | | 45 m | | | | |
| Interference Contour: | | | | 110.3 dBu | | | | |
| Artificial RX Antenna Height: | | | | 6 m | | | | |
| Antenna Type: | | | | Nicom BKG77 - 6 bay 0.85 wave spacing | | | | |
| 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 | 0.679 | 0.115 | -9.38 | 230.06 | 447.47 | 104.52 | 516.32 | 103.28 |
| 10 | 0.068 | 0.001 | -29.37 | 23.04 | 224.59 | 90.52 | 259.14 | 89.28 |
| 15 | 0.229 | 0.013 | -18.82 | 77.59 | 150.68 | 104.53 | 173.87 | 103.29 |
| 20 | 0.088 | 0.002 | -27.13 | 29.82 | 114.03 | 98.65 | 131.57 | 97.41 |
| 25 | 0.124 | 0.004 | -24.15 | 42.01 | 92.28 | 103.47 | 106.48 | 102.22 |
| 30 | 0.116 | 0.003 | -24.73 | 39.30 | 78.00 | 104.35 | 90.00 | 103.10 |
| 35 | 0.040 | 0.000 | -33.98 | 13.55 | 67.99 | 96.29 | 78.46 | 95.05 |
| 40 | 0.123 | 0.004 | -24.22 | 41.67 | 60.67 | 107.04 | 70.01 | 105.79 |
| 45 | 0.064 | 0.001 | -29.90 | 21.68 | 55.15 | 102.19 | 63.64 | 100.95 |
| 50 | 0.048 | 0.001 | -32.40 | 16.26 | 50.91 | 100.39 | 58.74 | 99.15 |
| 55 | 0.109 | 0.003 | -25.27 | 36.93 | 47.61 | 108.09 | 54.93 | 106.85 |
| 60 | 0.092 | 0.002 | -26.74 | 31.17 | 45.03 | 107.10 | 51.96 | 105.86 |
| 65 | 0.034 | 0.000 | -35.39 | 11.52 | 43.03 | 98.85 | 49.65 | 97.61 |
| 70 | 0.022 | 0.000 | -39.17 | 7.45 | 41.50 | 95.39 | 47.89 | 94.14 |
| 75 | 0.055 | 0.001 | -31.21 | 18.64 | 40.38 | 103.58 | 46.59 | 102.34 |
| 80 | 0.063 | 0.001 | -30.03 | 21.35 | 39.60 | 104.93 | 45.69 | 103.69 |
| 85 | 0.062 | 0.001 | -30.17 | 21.01 | 39.15 | 104.89 | 45.17 | 103.65 |
| 90 | 0.062 | 0.001 | -30.17 | 21.01 | 39.00 | 104.93 | 45.00 | 103.68 |

CROSS-SERVICE FILL-IN COVERAGE

