

**KLQS-LP AGUA DULCE, CA**  
**FAC ID NO 195731**  
**MINOR CHANGE OF FACILITIES**

**CHANNEL SPACING**

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                                Lancaster Educational Broadcast Service
REFERENCE                      CLASS = L1                      DISPLAY DATES
34 29 34.2 N.                  Current Spacings to 2nd Adj.    DATA 05-14-19
118 18 41.4 W.                  SEARCH 06-18-19
----- Channel 248 - 97.5 MHz -----

Call          Channel  Location          Azi      Dist    FCC    Margin
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KAMP-FM  LIC-D  246B  Los Angeles      CA      142.6    37.14   66.5   -29.4
KLAX-FM  LIC-Z  250B  East Los Angeles CA      163.8    38.04   66.5   -28.5
KLYY     LIC-D  248B  Riverside        CA      104.6   111.51  111.5    0.01
KTPI-FM  LIC    249A  Mojave           CA       13.7    55.54   55.5    0.04
KHUG-LP  LIC    248L1 Castaic          CA      271.1    29.96   23.5     6.5
KRJK     LIC    247A  Lamont           CA      334.6    86.20   55.5   30.7
K287AL   CP     247D  Mojave           CA       13.7    55.54   20.5   35.0
KLSB     LIC    248B  Goleta           CA      271.8   151.22  111.5   39.7
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Reference station has protected zone issue: Mexico
All separation margins include rounding

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**SECOND ADJACENT PROTECTION:** Proposed is outside of the KLAX-FM 60 dBu contour (see Figure 1). Proposed is outside of the KAMP-FM 54 dBu protected contour (see Figure 2). Although short-spaced, the Figures demonstrate no interference within those station's protected contours.

**PROPOSED CHANNEL CHANGE:** Per Section 73.870(a)(1) LPFM facilities may change channels "upon a technical showing of reduced interference, to any frequency."

On current channel: Incoming interference from KLJR-FM: 42.7 dBu (Figure 3)

On proposed channel: Incoming interference from KHUG-LP: 41 dBu (Figure 4)

Other co-channel stations on proposed channel: According to Longley-Rice study, KLYY and KLSB are terrain-blocked (see Figures 5 and 6)

Hence, Channel 248 has less interference.

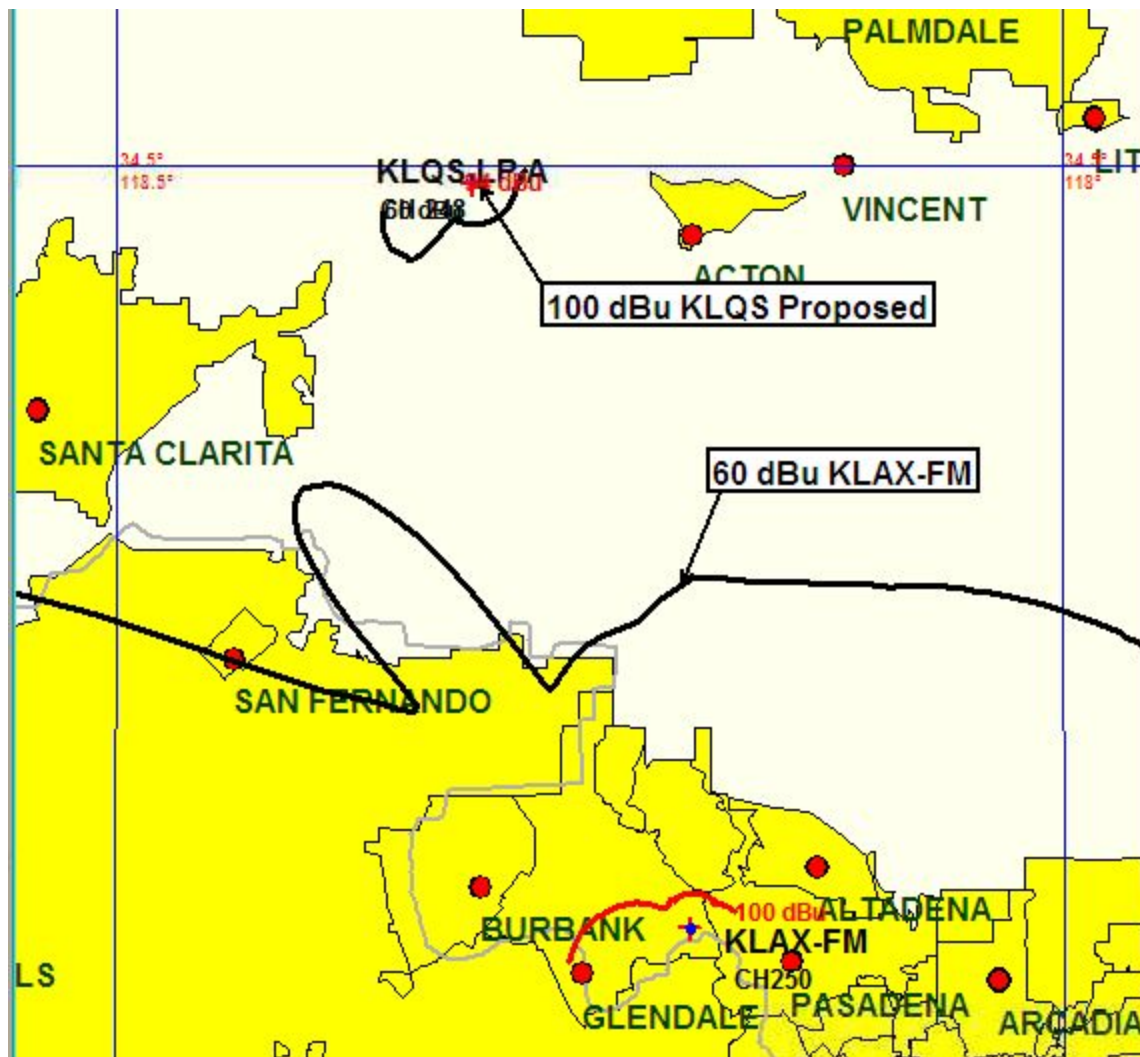


Figure 1: Proposed outside of KLAX-LP 60 dBu.

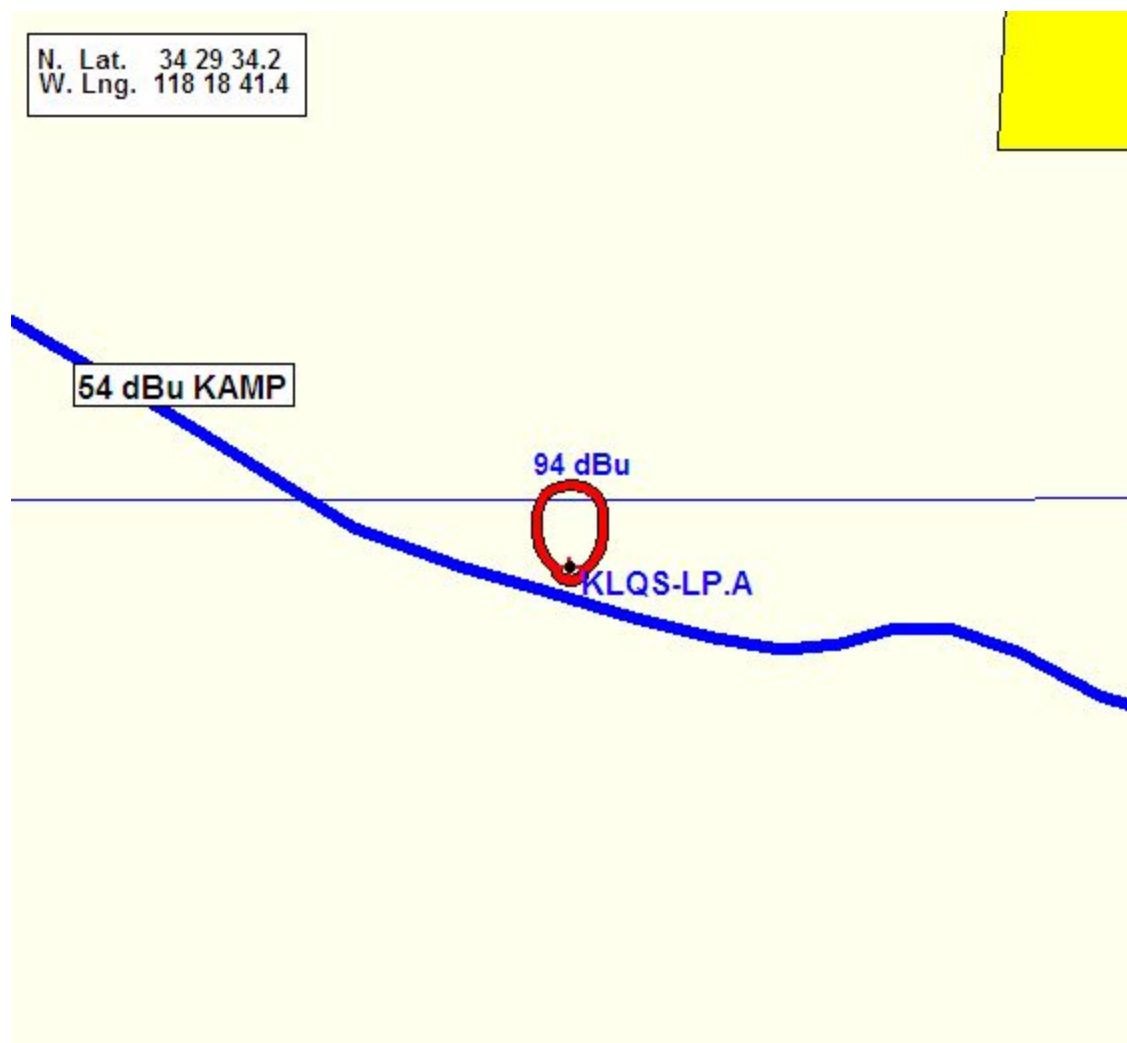
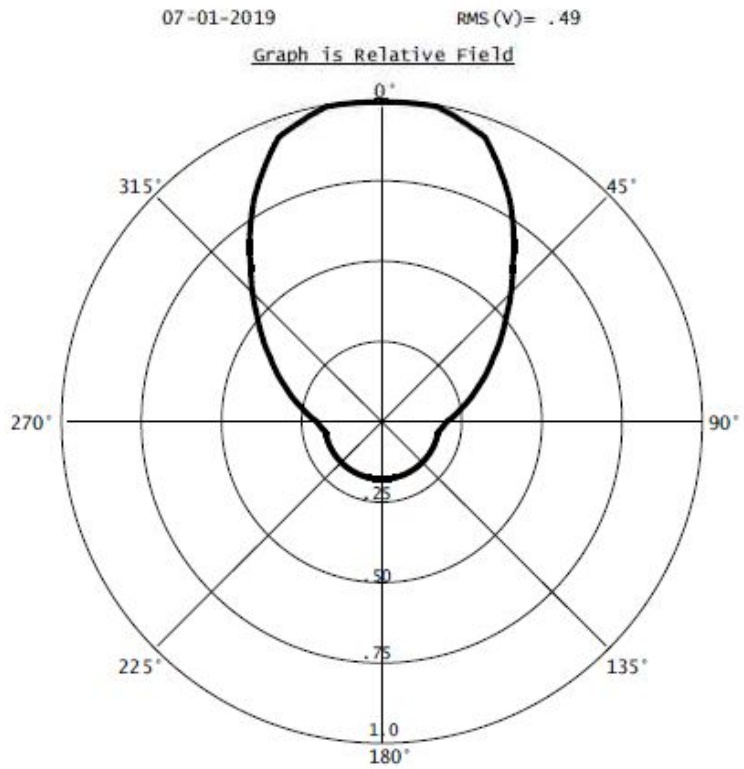


Figure 2: Proposed is outside KAMP-FM 54 dBu

Per 73.816(c)(2), this is to be a directional station (justified in protection of KAMP-FM)

Azi	Field	dBk	kw
000	1.000	-13.010	0.050
010	1.000	-13.010	0.050
020	0.945	-13.502	0.045
030	0.799	-14.959	0.032
040	0.636	-16.941	0.020
050	0.506	-18.927	0.013
060	0.402	-20.926	0.008
070	0.320	-22.907	0.005
080	0.254	-24.914	0.003
090	0.202	-26.903	0.002
100	0.179	-27.953	0.002
110	0.179	-27.953	0.002
120	0.179	-27.953	0.002
130	0.179	-27.953	0.002
140	0.179	-27.953	0.002
150	0.179	-27.953	0.002
160	0.179	-27.953	0.002
170	0.179	-27.953	0.002
180	0.179	-27.953	0.002
190	0.179	-27.953	0.002
200	0.179	-27.953	0.002
210	0.179	-27.953	0.002
220	0.179	-27.953	0.002
230	0.179	-27.953	0.002
240	0.179	-27.953	0.002
250	0.179	-27.953	0.002
260	0.179	-27.953	0.002
270	0.202	-26.903	0.002
280	0.254	-24.914	0.003
290	0.320	-22.907	0.005
300	0.402	-20.926	0.008
310	0.506	-18.927	0.013
320	0.636	-16.941	0.020
330	0.799	-14.959	0.032
340	0.945	-13.502	0.045
350	1.000	-13.010	0.050



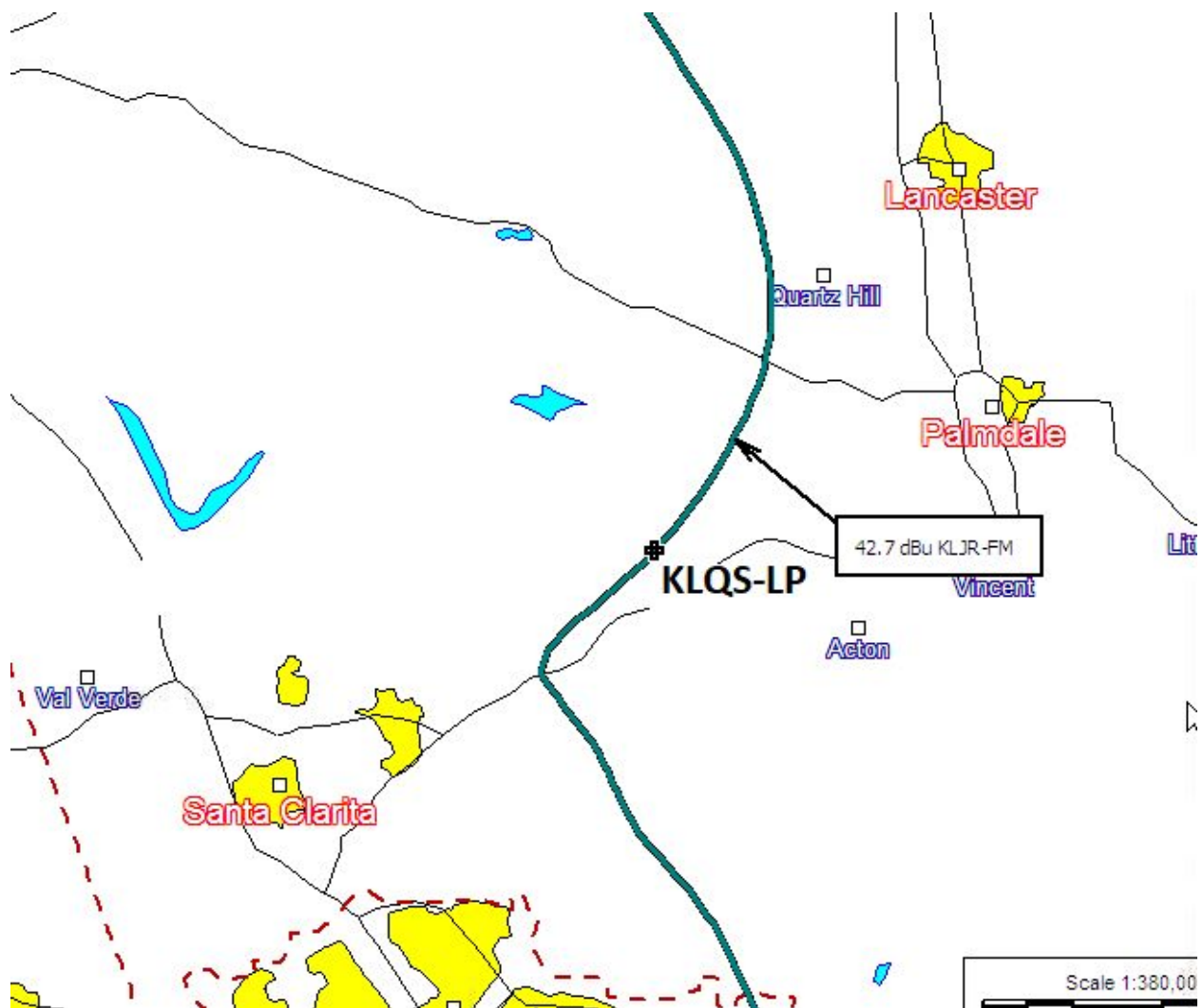


Figure 3: KLJR-FM 42.7 dBu interference contour at KLQS-LP site

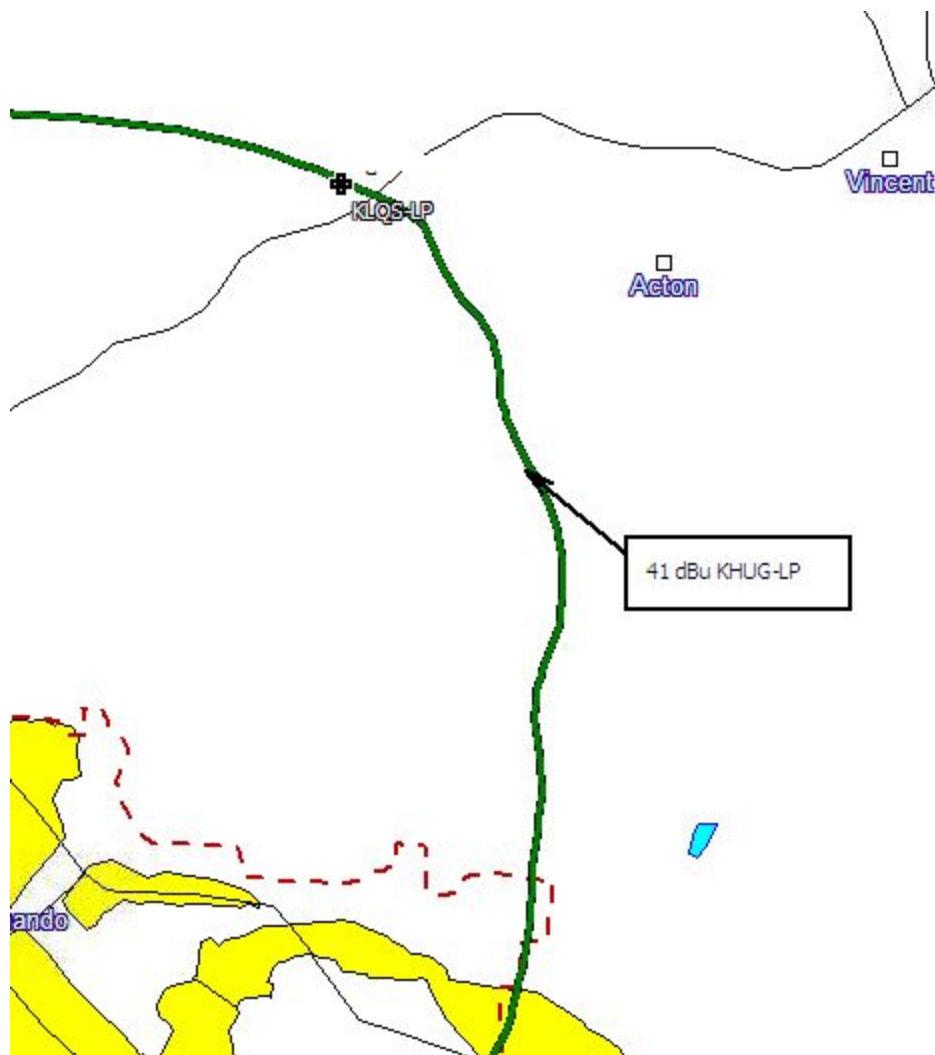


Figure 4: KHUG 41 dBu interference contour at proposed KLQS-LP site

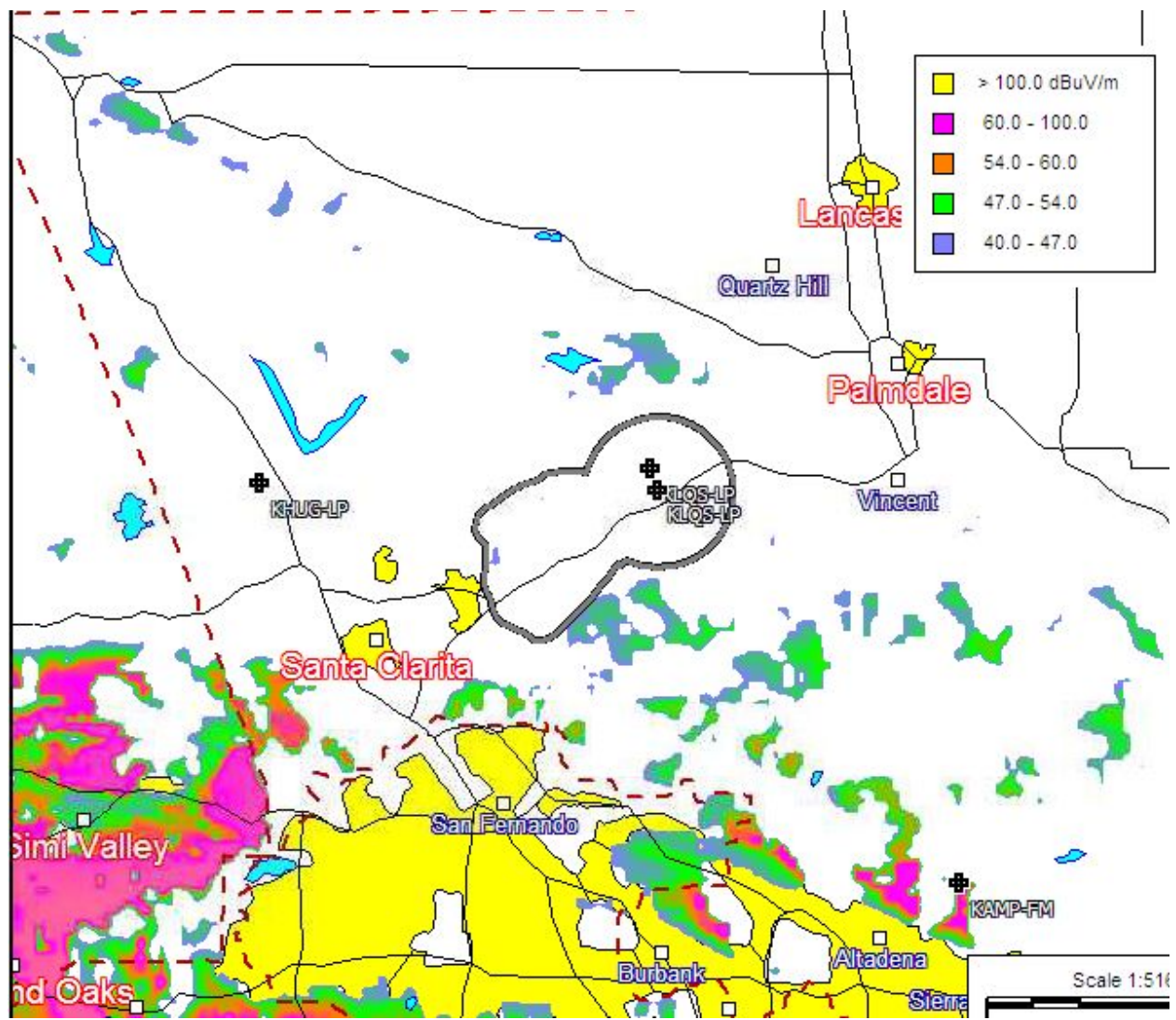


Figure 5: Propagation from co-channel KLSB-FM at the proposed site (TERRAIN-BLOCKED)



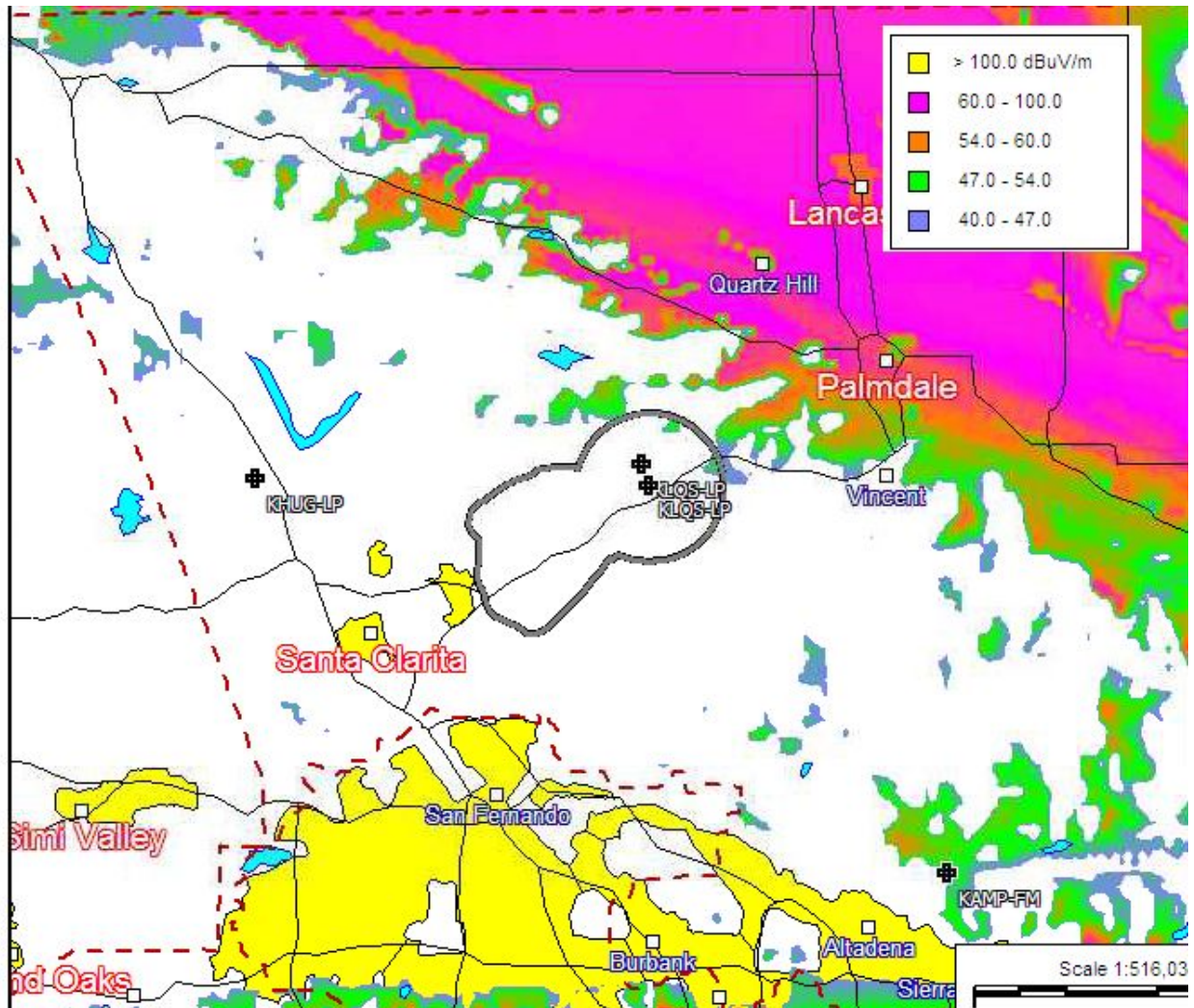


Figure 6: Propagation from co-channel KLYY at the proposed site (TERRAIN-BLOCKED)



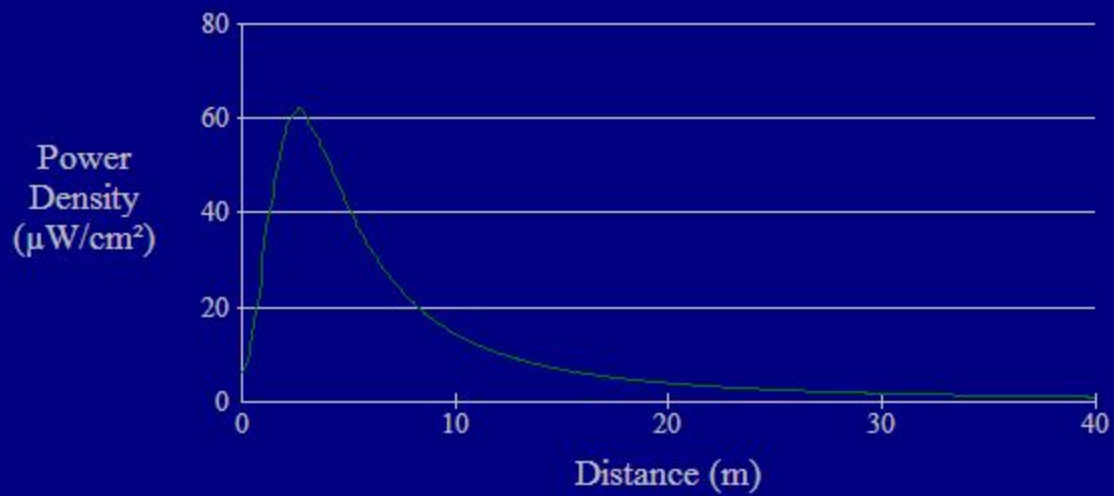
**TOWAIR: PASS**

DETERMINATION Results	
Antenna Structures whose total height (AGL) is <= 6.1 meters (20 feet) do not require registration	
Your Specifications	
NAD83 Coordinates	
Latitude	34-29-34.2 north
Longitude	118-18-44.7 west
Measurements (Meters)	
Overall Structure Height (AGL)	6.1
Support Structure Height (AGL)	0
Site Elevation (AMSL)	793
Structure Type	
MAST - Mast	

## **ENVIRONMENTAL PROTECTION ACT NIER ANALYSIS**

The applicant proposes mounting a new antenna on a mast, at 6.1 m AGL, with 50 watts ERP. A one-bay dipole antenna is proposed. Since the precise antenna is not modeled in FM Model (online version), the “Shively Model 6513/6510 Vertical Dipole” is the closest setting for downward radiation. The antenna is therefore 4.3m above a six foot human. FM Model predicted a maximum RF exposure of 62.1  $\mu\text{W}/\text{cm}^2$  ,at 2.72 meters from the tower base (see next page). This represents 31% of the Maximum Permissible Exposure (MPE) of 200 $\mu\text{W}/\text{cm}^2$  for uncontrolled environments. There are no other transmitting RF facilities in the area. Site is on private property. The applicant will ensure that a warning sign is posted.

## Power Density vs Distance



Office of Engineering and Technology

Distance (m):  Antenna Type:

Horizontal ERP (W):

Number of Elements:

Vertical ERP (W):

Antenna Height (m):

Element Spacing:

[Update Graph](#)