

## **Second Adjacent Channel Exhibit & Waiver Request**

### **KCLA-LP – Facility ID# 197367**

**April 2024**

#### **Engineering Parameters:**

Coordinates NAD 83:	33 44 12.34 N, 118 18 29.5 W
Center of Radiation:	12 meters AGL
Ground Elevation:	99.2 meters AMSL
HAAT:	78 meters HAAT
Power:	10 watts ERP
Frequency/Channel:	100.7 MHz / Ch.264

Minor move modification at 10 watts ERP, 12 meters AGL, and 78 meters HAAT requests second adjacent waiver. Exhibit is provided demonstrating no interference will be caused to any population.

The D/U Ratio Study dataset calculations exported from V-Soft Probe broadcast engineering software shows the estimated signal strength of KRTH FM at 79.05 dBuV/m FCC f(50,50), and at 88.65 dBuV/m using Longley Rice terrain-sensitive methodology. The estimated signal strength of KKLQ (FM) is calculated to 69.04 dBuV/m using FCC f(50,50) calculations, and at 78.91 dBuV/m by Longley Rice calculations.

The use of Longley-Rice methodology as previously granted for KCLA-LP Application File Number: 0000106024 is consistent with 47 CFR § 73.807(e)(1), which allows for "*terrain-sensitive propagation models, that its proposed operations will not result in interference to any authorized radio service.*"

VSoft Probe software employs calculations based on Tech Note 101 consistent with OET procedures for routinely determining 70 dBu Longley-Rice contours of FM facilities.

Under its current License authorization also granted using Longley-Rice methodology, KCLA-LP has received no reports and no complaints of second-adjacent interference.

Calculations at the new site also show as resulting in even less interference than KCLA-LP's current License authorization.

With an additional 40 dBu and rounded to the nearest kilometer, KRTH FM is protected to 129 dBuV/m at the new location.

KKLQ (FM), with an additional 40 dBu and rounded to the nearest kilometer, is protected to **119 dBuV/m**. at the new location.

Per the attached antenna data specifications provided by a manufacturer, Depression angles extending below a standard single bay antenna at 10 watts ERP will produce a *de minimus* worst-case interference radius of 14.8 meters at 2 meters above ground level in a single-story building.

Interference will remain sufficiently cleared of occupied areas. No population will be subject to interference according to the undesired-to-desired ratio method.

### **Scala FMVMP-1 – Single bay antenna**

Interference contour: **119 dBuV/m**

Power: **0.01 kW ERP**

depression angle below horizon	relative field	db from relative	ERP	angular distance to contour	vertical distance	horizontal distance	clearance above ground
0	1.000	0.00	10.00	24.872	0.000	24.872	12.400
5	0.995	-0.04	9.90	24.748	2.157	24.654	10.243
10	0.982	-0.16	9.64	24.425	4.241	24.054	8.159
15	0.956	-0.39	9.14	23.778	6.154	22.968	6.246
20	0.918	-0.74	8.43	22.833	7.809	21.456	4.591
25	0.867	-1.24	7.52	21.564	9.114	19.544	3.286
30	0.803	-1.91	6.45	19.973	9.986	17.297	2.414
35	0.727	-2.77	5.29	18.082	10.372	<b>14.812</b>	<b>2.028</b>
40	0.645	-3.81	4.16	16.043	10.312	12.289	2.088
45	0.558	-5.07	3.11	13.879	9.814	9.814	2.586
50	0.472	-6.52	2.23	11.740	8.993	7.546	3.407
55	0.388	-8.22	1.51	9.650	7.905	5.535	4.495
60	0.310	-10.17	0.96	7.710	6.677	3.855	5.723
65	0.240	-12.40	0.58	5.969	5.410	2.523	6.990
70	0.176	-15.09	0.31	4.378	4.114	1.497	8.286
75	0.119	-18.49	0.14	2.960	2.859	0.766	9.541
80	0.067	-23.48	0.04	1.666	1.641	0.289	10.759
85	0.019	-34.42	0.00	0.473	0.471	0.041	11.929
90	0.025	-32.04	0.01	0.622	0.622	0.000	11.778

# Signal Strength Calculations

## Data export from V-Soft Probe software

### Point Information Report

Latitude: 33-44-12.30 N  
Longitude: 118-18-30.15 W

Signal Strength: 78.909 dBuV/m  
Elevation: 92.277 m

Distance From Transmitter: 58.713 km  
Azimuth From Transmitter: 202.39 degrees

Call Letters: KKLQ  
File Number: BMLD20171004AAG  
Latitude: 34-13-35 N  
Longitude: 118-04-01.20 W  
ERP: 5.40 kW  
Channel: 262  
Frequency: 100.3 MHz  
AMSL Height: 1782.0 m  
Elevation: 1739.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No

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### Point Information Report

Latitude: 33-44-12.30 N  
Longitude: 118-18-30.15 W

Signal Strength: 88.65 dBuV/m  
Elevation: 92.277 m

Distance From Transmitter: 58.779 km  
Azimuth From Transmitter: 202.31 degrees

Call Letters: KRTH  
File Number: BMLH20071015AJG  
Latitude: 34-13-38 N  
Longitude: 118-04-03.20 W  
ERP: 51.00 kW  
Channel: 266  
Frequency: 101.1 MHz  
AMSL Height: 1854.0 m  
Elevation: 1741.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No

Study Information:

Coverage Study

Signal Resolution: 1.0 km

Study Date: 4/26/2024

FM Data Date: 4/22/2024

TV Data Date: 10/20/2021

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database

Secondary Terrain: V-Soft 3 Second Alaska Terrain

Coordinate System: NAD83

Call Sign	Area Of Calculation
KCLA-LP (264)	Circle: R = 60 km
KRTH (266)	Circle: R = 60 km
KKLQ (262)	Circle: R = 60 km

Transmitters:

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Transmitter Information:

Call Letters: KCLA-LP  
File Number: 0000106024  
Latitude: 33-44-12.30 N  
Longitude: 118-18-30.15 W  
ERP: 0.01 kW  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 99.6 m  
Elevation: 87.2 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
Propagation Model: Longley-Rice  
Climate: Continental temperate  
Conductivity: 0.0050  
Dielectric Constant: 15.0  
Refractivity: 311.0  
Receiver Height AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Situation Variability: 50.0%  
ITM Mode: Broadcast  
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Transmitter Information:

Call Letters: KRTH  
File Number: BMLH20071015AJG  
Latitude: 34-13-38 N  
Longitude: 118-04-03.20 W  
ERP: 51.00 kW  
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AMSL Height: 1854.0 m  
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Climate: Continental temperate  
Conductivity: 0.0050  
Dielectric Constant: 15.0  
Refractivity: 311.0  
Receiver Height AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Situation Variability: 50.0%  
ITM Mode: Broadcast  
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Transmitter Information:

Call Letters: KKLQ  
File Number: BMLED20171004AAG  
Latitude: 34-13-35 N  
Longitude: 118-04-01.20 W  
ERP: 5.40 kW  
Channel: 262  
Frequency: 100.3 MHz  
AMSL Height: 1782.0 m  
Elevation: 1739.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
Propagation Model: Longley-Rice  
Climate: Continental temperate  
Conductivity: 0.0050  
Dielectric Constant: 15.0  
Refractivity: 311.0  
Receiver Height AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Situation Variability: 50.0%  
ITM Mode: Broadcast  
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# TOWAIR Clearance

## TOWAIR Determination Results

[HELP](#)

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A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

**\*\*\* NOTICE \*\*\***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results							
<b>PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS &amp; 7316.72 MTRS (7.3167 KM) AWAY</b>							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-47-58.00N	118-19-58.00W	ZAMPERINI FLD	LOS ANGELES TORRANCE, CA	24.1	1524.3
<b>PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS &amp; 7484.66 MTRS (7.48470 KM) AWAY</b>							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-48-0.00N	118-20-11.00W	ZAMPERINI FLD	LOS ANGELES TORRANCE, CA	24.1	1524.3
<b>PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS &amp; 7220.71 MTRS (7.22069 KM) AWAY</b>							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	B	33-48-33.00N	118-20-44.00W	ZAMPERINI FLD	LOS ANGELES TORRANCE, CA	24.1	1524.3
<b>Your Specifications</b>							
<b>NAD83 Coordinates</b>							
Latitude						33-44-12.3 north	
Longitude						118-18-29.5 west	
<b>Measurements (Meters)</b>							
Overall Structure Height (AGL)						13	
Support Structure Height (AGL)						4	
Site Elevation (AMSL)						87.2	
<b>Structure Type</b>							
BPOLE - Building with Pole							

# HAAT Calculations

## Antenna Height Above Average Terrain Calculations -- Results

### Input Data

Latitude **33° 44' 12.34" North**  
 Longitude **118° 18' 29.5" West (NAD 83)**

These coordinates convert to NAD 27 coordinates of  
 33° 44' 12.27", North, 118° 18' 26.24" West (NAD 27).

Height of antenna radiation center above mean sea level: **99.6 meters AMSL**

Number of Evenly Spaced Radials = **8**    0° is referenced to True North

### Results

**Calculated HAAT = 78 meters**

Antenna Height Above Average Terrain calculated  
 using FCC 30 second terrain database (continental USA only)

### Individual "Radial HAAT" Values, in meters

0°	71.6 m
45°	87.2 m
90°	99.6 m
135°	99.3 m
180°	99.6 m
225°	99.6 m
270°	82.2 m
315°	-15.2 m

[Print Results?](#)

[New Calculation?](#)