

TECHNICAL SUMMARY
APPLICATION FOR CONSTRUCTION PERMIT
LPFM STATION KRHM-LP
BAKERSFIELD, CALIFORNIA
CH 277 (103.3 MHZ) 0.1 KW 13 M

1. **Application Purpose:** It is proposed to relocate the KRHM-LP transmitter site, change from channel 278 (103.5 MHz) to 1st lower adjacent channel 277 (103.3 MHz) and modify facilities.

2. **Section 73.871(c)(1) Compliance:** The proposed site move is considered to be minor as it involves a move of less than 11.2 kilometers (see Figure 1).

3. **Section 73.807(a)(1) Compliance:** Figure 1 is an allocation study for channel 277 based on the minimum distance separations contained in Section 73.807(a)(1). As indicated, the proposed KRHM-LP operation is fully-spaced to all pertinent stations.

4. **RFR Compliance:** The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed Progressive Concepts CIRPA 2-bay 1-wavelength spaced antenna will be located 16 meters above ground level. The total ERP is 0.200 kW (horizontal plus vertical polarization). Figure 2 depicts the output of the FCC's FM Model program. As indicated, a maximum power density of 20.7 uW/cm² will occur at a point located 3.4 meters from the supporting structure. This is only 10.4% of the FCC's recommended limit of 200 uw/cm² for FM frequencies for an uncontrolled environment and only 2.07% of the FCC's recommended limit of 1000 uw/cm² for FM frequencies for a controlled environment. Therefore, it is believed that the proposed operation is in full compliance with the FCC's requirements with regard to RFR exposure.

The transmitting antenna will be side-mounted on a mast on the roof of a building, which is not accessible and will be appropriately marked with RFR warning signs. Furthermore, in event that personnel are required to access the roof of the building, the proposed LPFM transmissions shall be reduced or terminated as necessary to prevent RF exposure above FCC recommended limits.

5. **Antenna Structure Registration:** As indicated by the attached results from the FCC's TOWAIR program, the supporting tower structure does not require registration.

LPFM Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



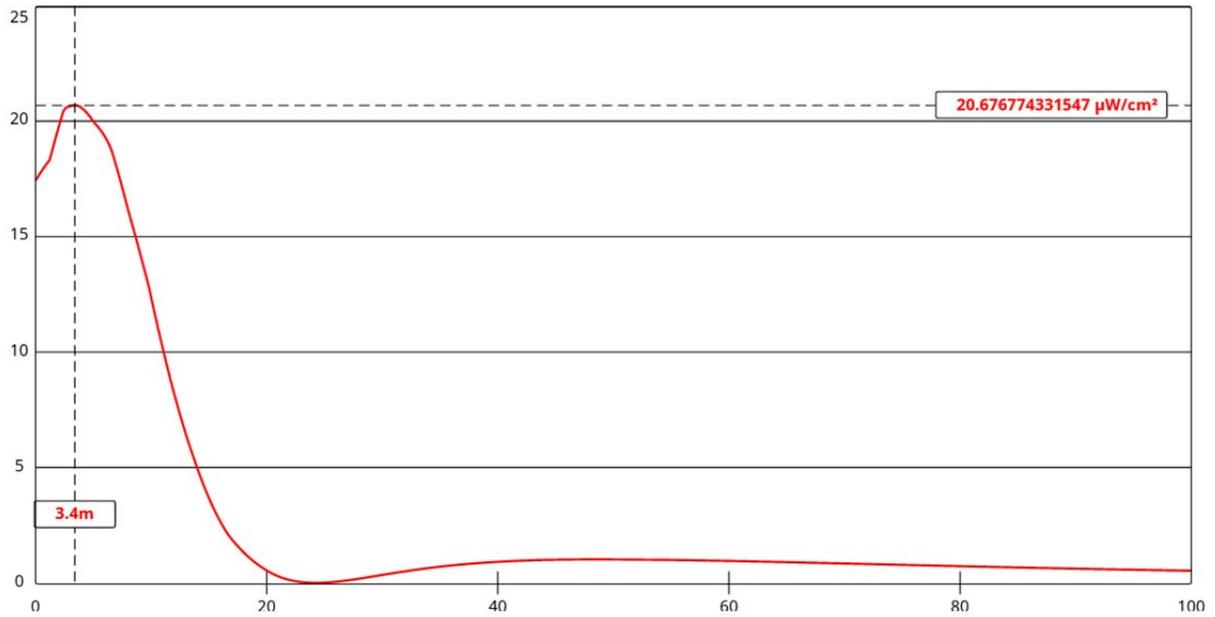
Channel: 277 **Coordinates:** 035-18-31.4 119-03-57.2 (NAD 83) **Buffer:** 30 km **Type:** LP100

Comment: Proposed KRHM-LP

<i>Callsign</i>	<i>Status</i>	<i>Channel</i>	<i>Service</i>	<i>Freq.</i>	<i>City</i>	<i>State</i>	<i>Co.</i>	<i>Rec.</i>	<i>Latitude</i>	<i>Dist. (km)</i>	<i>Sep. (km)</i>	<i>Spac. (km)</i>
<i>Facility ID</i>	<i>ARN</i>			<i>Class</i>	<i>DA</i>	<i>Ant. ID</i>	<i>ERP (kW)</i>	<i>HAAT (m)</i>	<i>Longitude</i>	<i>Bear. (deg)</i>	<i>Comment</i>	
KMYX-FM	LIC	223	FM	92.5	ARVIN	CA	US	C	35-11-41.1	35.16	6	29.16
21209	BLH	20120105ABB		A	N		0.62	312	118-42-16	111.07	CLEAR	
KIWI	LIC	275	FM	102.9	MCFARLAND	CA	US	C	35-19-16	58.42	46	12.42
8108	BLH	20020919AAY		B1	N		25	98	119-42-26	271.54	CLOSE	
KSRY	LIC	276	FM	103.1	TEHACHAPI	CA	US	C	35-04-30	68.49	56	12.49
66228	BLH	19921125KC		A	N		1.9	176	118-22-08	112.14	CLOSE	
KRUZ	LIC	277	FM	103.3	SANTA BARBARA	CA	US	C	34-31-29	119.33	112	7.33
8853	BLH	19990513KB		B	N	29045	105	905	119-57-32	223.33	CLOSE	
880505PH	VAC	277	FA	103.3	LINDSAY	CA	US	C	36-17-14	110.48	87	23.48
13966				B1					118-50-17	10.59	CLEAR	
KRHM-LP	LIC	278	FL	103.5	BAKERSFIELD	CA	US	C	35-16-02	5.58	14	-8.42
123382	BLL	20050523AAF		L1	N		0.1	24.486353	119-01-49	145.72	SHORT	/1
KBDS	LIC	280	FM	103.9	TAFT	CA	US	C	35-07-04	41.68	29	12.68
456	BLH	19900504KD		A	N		6	100	119-27-33	239.45	CLOSE	

/1 Licensed Site

Figure 2



[View Tabular Results +](#)

Channel Selection	Channel 277 (103.3 MHz) ▾		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▾		
Height (m)	<input type="text" value="16"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="100"/>	ERP-V (W)	<input type="text" value="100"/>
Num of Elements	<input type="text" value="2"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

TOWAIR Determination Results

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

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 6523.63 MTRS (6.52360 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	35-19-9.00N	118-59-43.00W	BAKERSFIELD MUNI	KERN BAKERSFIELD, CA	113.4	1219.2

Your Specifications

NAD83 Coordinates

Latitude	35-18-31.4 north
Longitude	119-03-57.2 west

Measurements (Meters)

Overall Structure Height (AGL)	18
Support Structure Height (AGL)	9
Site Elevation (AMSL)	112

Structure Type

BMAST - Building with Mast

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW