

ENGINEERING STATEMENT

This engineering data contained herein have been prepared on behalf of TRI-STATE CHRISTIAN RADIO, licensee of LPFM station KCAN-LP, Channel 276L1 in Needles, California, in support of this minor-change Application for Construction Permit to specify operation on Channel 223L1 from the presently authorized site. It is also proposed herein to increase the station's antenna height and effective radiated power. This move of 53 channels is required since KDMM(FM) in Parker Strip, Arizona, has filed for and been authorized to move from Channel 275C2 to Channel 276B1 and will cause significant interference to the reception of KCAN-LP, once the change to Channel 276B1 is implemented by KDMM.

The licensee proposes to raise the one-bay circularly polarized antenna to a height of 30.4 meters at the presently authorized site. The proposed effective radiated power will be 100 watts. The 60 dBu service contour of the new KCAN-LP facility is plotted in Exhibit B. Exhibit C is a channel study indicating that Channel 223L1 is available for use by KCAN-FM and it meets all spacing requirements. A power density calculation is provided in Exhibit D.

The FCC has assigned Antenna Structure Registration Number 1242260 to the tower on which the new antenna will be mounted.

I declare under penalty of perjury that the foregoing statements and the attached exhibits are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized and written in a cursive-like font.

March 20, 2017

KEVIN T. FISHER

**CONTOUR POPULATION
2010 U.S. CENSUS DATA
7,703 (4,581 HH)**



**Proposed KCAN-LP
Latitude: 34-49-43 N
Longitude: 114-36-38 W
ERP: 0.10 kW
Channel: 223
Frequency: 92.5 MHz
AMSL Height: 219.4 m**

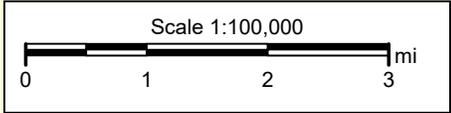
**60 DBU FCC
CONTOUR**

AZ

Needles

KCAN-LP

CA



**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED KCAN-LP
CH. 223L1 - NEEDLES, CALIFORNIA**

EXHIBIT C

PROPOSED KCAN-LP NEEDLES, CALIFORNIA

REFERENCE		DISPLAY DATES
34 49 43.0 N.	CLASS = L1 Int = L1	DATA 03-16-17
114 36 38.0 W.	Current Spacings to 2nd Adj.	SEARCH 03-20-17
----- Channel 223 - 92.5 MHz -----		

Call	Channel	Location		Azi	Dist	FCC	Margin
K222AV	LIC-D 222D	Parker		AZ 128.8	49.02	27.5	21.5
KOMP	LIC 222C	Las Vegas		NV 327.7	149.86	119.5	30.4
K224BV	LIC-D 224D	Kingman		AZ 65.1	70.85	27.5	43.4

All separation margins include rounding

POWER DENSITY CALCULATION
PROPOSED LPFM STATION KCAN-LP
CHANNEL 223L1 – NEEDLES, CALIFORNIA

Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 100 watts (H,V), an antenna radiation center 30.4 meters above ground level and assuming a relative field value of 40 percent at the steeper elevation angles for the proposed antenna, maximum power density two meters above ground of 0.0013 mW/cm^2 is calculated to occur near the base of the antenna supporting structure. Since this value is less than 1.0 percent of the 0.20 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating in the FM band, a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing electromagnetic radiation.