

Engineering Statement

302-FM for BPED-20130124ACN KCLM, 89.7 MHz, Santa Maria, CA

Purpose

The instant 302-FM license application is submitted by California Lutheran University (“CLU”) to cover Construction Permit BPED-20130124ACN for Educational FM station KCLM, Santa Maria, CA. The facility is now constructed and ready to begin programming; Program Test Authority is simultaneously being requested.

Special Operating Conditions Or Restrictions

The Construction Permit contained ten (10) Special Operating Conditions or Restrictions; compliance with each condition/restriction is addressed here:

1. Antenna Proof Of Performance - Attachment 10 is a copy of the manufacturer’s (ERI) proof of performance.
2. Certification by Licensed Surveyor - Antenna alignment for the proper azimuth (298 degrees) was determined by Kenny Fargen of Fargen Surveys, Inc., Santa Maria, CA who was on site and directing said alignment. At the time this application is being submitted, he has not provided the necessary certification in order for it to be submitted with this application. A copy will be provided to the FCC as soon as it is received.
3. Community of License Coverage - A coverage map showing the composite pattern with the Community of Coverage highlighted is attached as Figure 1.
4. Qualifications of Engineer Overseeing Antenna Installation - I certify that I personally installed the directional FM antenna system in accordance with the instructions provided by the antenna’s manufacturer (ERI).

I have been gainfully employed in the broadcast engineering field since 1977, working in all phases of AM, FM, and Television engineering. I have installed other directional FM and TV antenna systems, have prepared several engineering applications for the Commission and have working knowledge of current FCC Rules and Regulations. I hold valid FCC License PG-11-27583 and am a Certified Professional Broadcast Engineer by the Society of Broadcast Engineers.

5. Antenna Minima and ERP - The underlying Construction Permit specified a maximum ERP of 2.45 kW with an principal minima of 0.39 kilowatts at 150 degrees. As per the manufacturer’s antenna proof of performance (see Attachment 10), the as-built antenna has an ERP of 0.376 kilowatts at 150 degrees.
6. Waiver of 73.1125 (Main Studio Rule) - CLU has a waiver to operate KCLM primarily as a satellite of non-commercial station KCLU-FM, Thousand Oaks, CA (see BALED-20130124ACJ).

7. Automatic Program Test Authority is not Applicable - Program Test Authority is being requested by submission of the instant 302-FM application.
8. RFR Compliance - On June 11, 2013, Radio Frequency Radiation measurements were made at the KCLM transmitter site using a Narda SRM-3001/01 meter (s/n D0003). Two sets of measurements were made: The first with KCLM turned off, in order to establish a baseline measurement, and the second with KCLM turned on. The SRM-3001 utilizes a shaped-response probe which provides the user an output in percentage of the applicable standard for the bands being measured. The meter also has a spectrum analyzer mode to allow the user to see which stations (frequencies) contribute what percentage to the total. The major contributors at this site are, in alphabetical order, KCOY-TV, Santa Maria, CA, KCLM(FM), Santa Maria, CA, KLWG(FM), Lompoc, CA and KXFM(FM), Santa Maria, CA. KCLM shares the same tower as KXFM, but all of the towers are located on the west side of the site.

Though access to the site is restricted via locked gates across privately owned land, the site was measured using the more restrictive General Population Exposure ("GPE") standard of OET65. The site is in full compliance with the GPE standard.

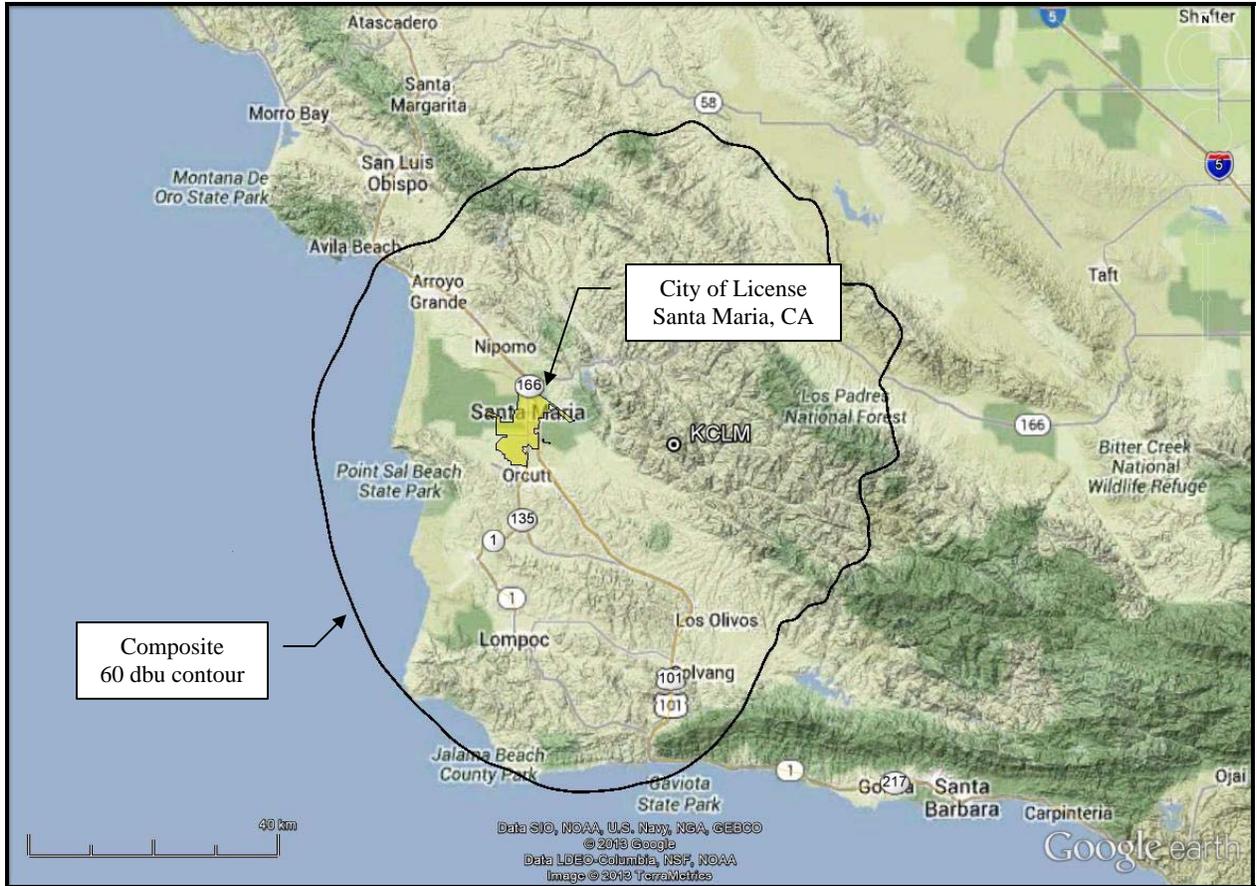
With KCLM operating at full power, the highest levels were found to be along the west side of the building and tower. Isolated "hot spots" of approximately 50-55% GPE could be found approximately 45 feet away from the tower near a satellite dish. A small spot of approximately 40-45% GPE was found about the same distance away near an air conditioner on the NW corner of the building. Most of the levels around the immediate area of the tower were in the 20-30% range. The RFR levels rapidly decline as one moves away from the towers. For example, the area on the east side of the building, which is used for vehicular parking and backup generator, had levels in the 12-17% range. Inside the building was less than 10% GPE.

9. Documentation Demonstrating Compliance of Special Operating Conditions Or Restrictions - See above responses.
10. Coordination with other users of the site for RFR Compliance - CLU understands this provision and agrees to cooperate with other users of the site as may be required to provide a safe working environment for radio frequency exposure.

Signed: Timothy P. Schultz

Dated: 6-12-13

Timothy P. Schultz, CPBE
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Community Coverage Map

**KCLM, Santa Maria
Ch. 209B (89.7 MHz)
2.45 kW – DA, 569m HAAT**

Figure 1