KLEIN BROADCAST ENGINEERING, L.L.C.

dedicated to improving the science and technology of radio and television communications

OCTOBER 2002

EXHIBIT E-10RHS
FCC FORM 302-FM APPLICATION
FOR FM BROADCAST STATION LICENSE
SALISBURY RADIO, L.L.C.
K W W V (FM)
FM CHANNEL 291 B1 / 106.1 mHz.
SANTA MARGARITA , CALIFORNIA

RF RADIATION HAZARD COMPLIANCE STATEMENT

The facilities proposed herein by the applicant, permittee or licensee, in this Engineering Exhibit comply with FCC O.S.T. Bulletin #65 and #65A as revised (1997) and the ANSI C-95.1-1982 RF and ANSI C95.1992 and the NCRP exposure guidelines. The interpolation of the figures from the above referenced document, page 18, supplement "A", shows a BEST case requirement of 9.7 meters height above ground level requirement for the radiation center of the installed two (2) bay full wave length spaced FM broadcast antenna. A combined vertical and horizontal effective radiated power of 2.20 kilowatts was used for this study and determination (1.10 kW Horiz. & 1.10 kW Vert.) The radiation center of the FM broadcast antenna system is located at 27 meters above ground level (AGL), well within the requirement for the antenna as determined from the above referenced documents. The antenna specified for use is a Shively Labs, model 6813 EPA Type 3, two (2) section, 1.0 wave length spaced, circularly polarized antenna. The antenna manufacturer, states its antenna meets the BEST case requirements for downward radiation pattern according to the FCC O.S.T. Bulleting #65 Guidelines. The antenna proposed uses NO beam tilt, with NO first null fill and NO second null fill.

Occupational compliance is certified by the reduction of operating power or the complete cessation of operation during such time maintenance personnel are no the antenna support structure. A transmitter "LOCK OUT" circuit has been installed to prevent accidental turn on of the transmission equipment during the time maintenance personnel are on the antenna support structure. The applicant, permittee or licensee will cooperate with other site users in order to comply with The FCC Guidelines on Human Exposure to Non-Ionizing RF Radiation.

In addition to the preceding the applicant, permittee or licensee, has by computer program, performed additional calculations to predict RF power density at the base of the antenna support structure. This program predicts a maximum power density of 15.3750 mircowatts/cM2 at a distance of 16.0 meters from the base of the antenna support structure at a height of 2.0 meters above ground level. This is only 7.68% of the allowable RF power density for uncontrolled areas under the FCC and ANSI/EPA Guidelines, being limited to: 1.00mW/cM2 for controlled areas and 200.0 microwatts/cM2 for uncontrolled areas. All other power density was calculated to be below this maximum predicted level for a distance of 0 to 1000 meters distance from the base of the antenna support structure at 2.0 meters above ground level. There is one other source of significant RFR at the KWWV(FM) site, which is that of the antenna of FM Broadcast Station KIQO(FM). Since the ERP of KIQO(FM) is 4.70kW and the radiation center of the antenna is 26 meters AGL, one could arithmetically add the two individual calculated power density levels together.

Since KIQO has a calculated power density of 83.105 microwatts/cM2 at a diatance of 10 meters from the base of the common antenna support structure and KWWV has a calculated power density of 15.375 microwatts/cM2 at a distance of 16 meters from the base of the common support structure, then the WORST CASE TOTAL RFR Power Density on the site is 98.480 microwatts/cM2 at a distance of 16 meter from the base of the antenna support structure this equals only 49.24% of the allowable RFR Power Density Level allowed for uncontrolled areas and is well within compliance with the previously quoted RFR Guidelines.

The computer program employed for the RFR analysis in this engineering exhibit uses either the Near Field or Far Field method for the calculation of power density and was written by the Commission's O.E.T. staff. In this particular case the Far Field Method was used. The formula used by the computer program was derived from the FCC O.S.T. Bulletin #65, as revised to date.

The formula may be stated in the following manner:

E(V/m) = 1.6*221.72*SQRT(ERP)*
(element pattern factor)*(array factor) / DIST

H(A/m) = 1.6*0.588*SQRT(ERP)*
(element pattern factor)*(array factor) / DIST

Where:

ERP = effective radiated power in kilowatts, relative to a half wave dipole.

DIST = distance in meters from the antenna radiation center to the observation point in meters.

The 1.6 factor found in the ANSI/EPA formula and used above at the beginning of each equation takes into account possible contributions from ground reflections. The element pattern factor in a linearly interpolated relative field value at the appropriate depression angle below the horizon as taken directly from the EPA data. The array factor is computed at the appropriate depression angle using the number of antenna elements, when normalized to 1.0 in the main lobe. This array factor only applies to antenna arrays of point sources where each source has equal power distribution and phase, and are uniformly spaced. The element patterns themselves can be associated with particular antenna designs. As of May 1986 there were six (6) element types identified for FM antennas as listed in the ANSI/EPA data and FCC Bulletin #65. The "ring and stub type" EPA Type 3 element is used on the Shively Labs model 6813 EPA Type 3 antenna is listed in the EPA data and was used for the calculations contained herein. There were two types listed for television, one for VHF and one for UHF.

The General Public will not have access to the site because the site is in a sparsely populated , remote, rural area. The only access to the site is by dirt road. The base of the tower and transmission equipment building is protected by a locked gate and fence. The locked gate and fence is around the perimeter of the tower base and transmission equipment building. Only authorized personnel have access to the locked gate. This will prevent General Public access to the actual site, tower base and transmission equipment building.

The applicant, permittee or licensee, has installed and posted RF Radiation Hazard Warning Signs in and around the site at approximately eye level for additional warning and safety.

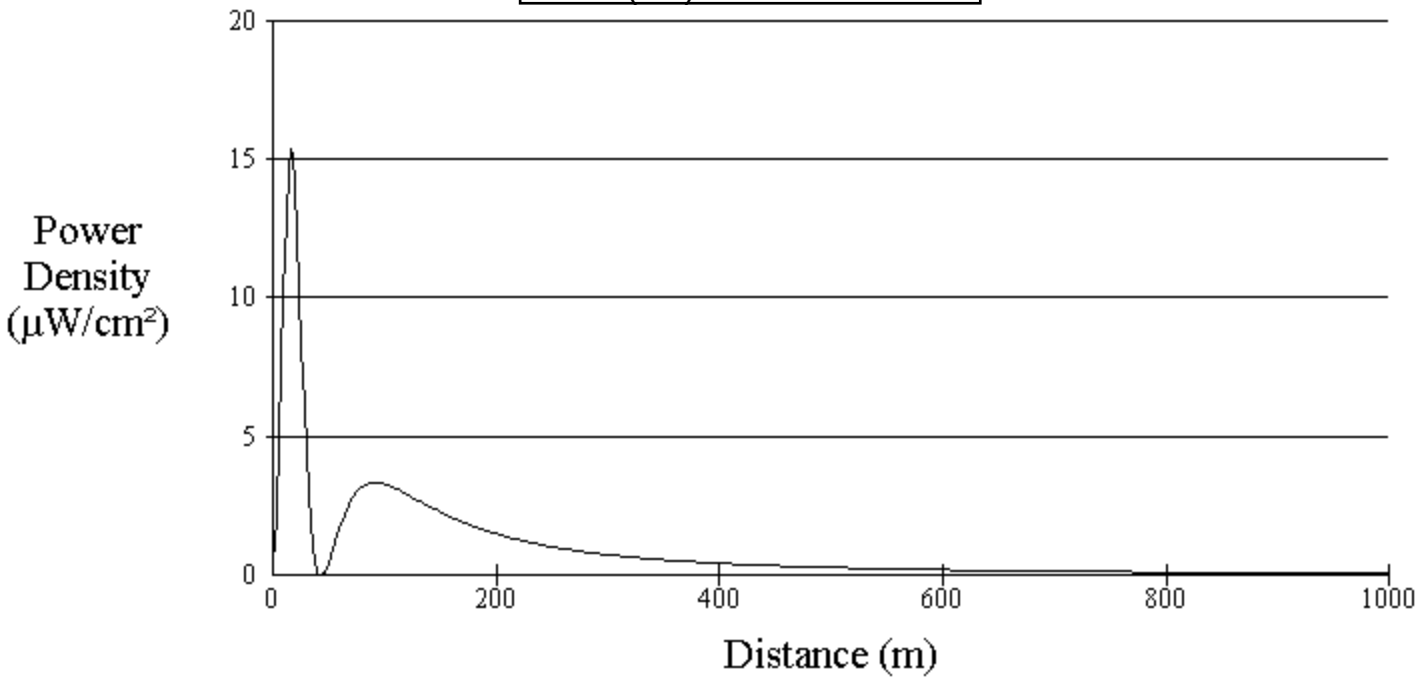
The applicant, permittee or licensee is a participant in the Cuesta Peak Broadcasters Group (CPBG) which coordinates access to the site and facilities therein. In this way the applicant provides a safe working environment for workers on the site in coordination with other CPBG member stations. KWWV(FM) through the CPBG has commissioned RFR Testing of the Cuesta Peak Communications Site through the consulting firm of Hammett & Edison of San Francisco, California. The most recent report and analysis is dated June 18, 1997. This report shows no ground level areas that exceed the FCC, ANSI and NCRP Guidelines for Human Exposure to Non-Ionizing RF radiation surrounding the KWWV tower site.

A vertical pattern plot of the Shively Labs model 6813 EPA Type 3 antenna to be employed at KWWV(FM) is included herein and is marked EXHIBIT E-11. This plot clearly shows this antenna has greatly reduced downward radiation and meets the BEST case requirements of FCC Bulletin #65, as amended to date.

The preceding assures compliance with the FCC, ANSI and NCRP requirements. Based on the preceding documents, tables, guidelines and calculations, the proposed operation of the main transmission facility for KWWV (FM) FM Broadcast Station is in compliance with the FCC O.S.T. Bulletin #65 and the ANSI C-95.1-1992 and the NCRP RF Exposure Guidelines as amended to date. The applicant, permittee or licensee certifies compliance with the ANSI, NCRP and FCC Human Exposure Guidelines to Non-Ionizing RF Radiation.

Power Density vs Distance

KWWV(FM) EXHIBIT E-10RHS



Office of Engineering and Technology

Distance (m):	1000	Antenna Type:	Shively 6800 series
Horizontal ERP (W):	1100	Number of Elements:	2
Vertical ERP (W):	1100		
Antenna Height (m):	27	Element Spacing:	1

Calculated MAXIMUM RFR Power Density 15.3750 microwatts (cM2) at 16.0 meters distant from the base of the antenna support structure at 2.0 meters above ground level.

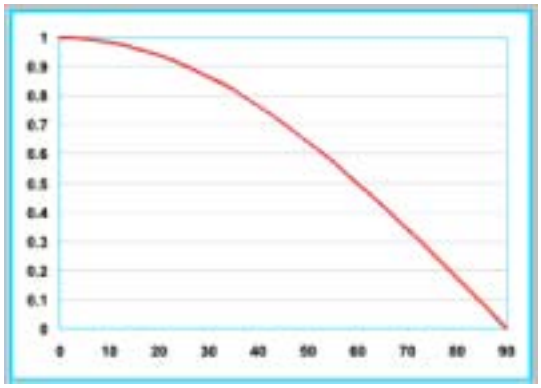
EXHIBIT E-11 VERTICAL PATTERN PLOT of SHIVELY model 6813 2 Bay FM Broadcast Antenna in use at KWWV(FM)

Shively Labs

Elevation Patterns for Shively FM Antennas (Full-Wave-Spaced)

Models and Configuration

This technical bulletin applies to Shively antenna models in the 6800-series (circularly polarized), 6500-series (vertically polarized), and 6600-series (horizontally-polarized), as well as Models 6014 and 6015, when arrayed in a full-wavelength spaced configuration. For other antenna models, and for antennas with beam tilt, null fill, or special spacing, contact Shively.



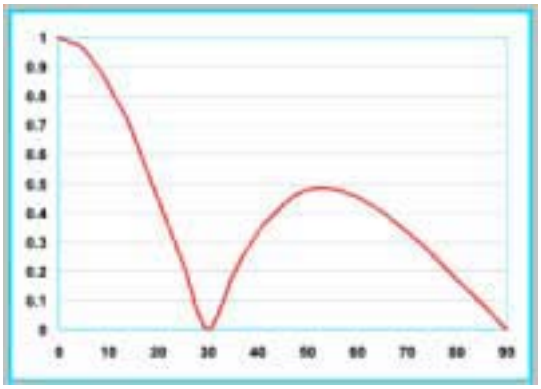
Single Bay

Power Gain:

6014, 6015, 6800-series: 0.46 (-3.40 dB)

6600-series: 0.92 (-0.40 dB)

6500-series: 0.92 (-0.40 dB)



VERTICAL PATTERN PLOT of SHIVELY model 6813 ===> 2 Bay FM Broadcast Antenna in use at KWWV(FM)

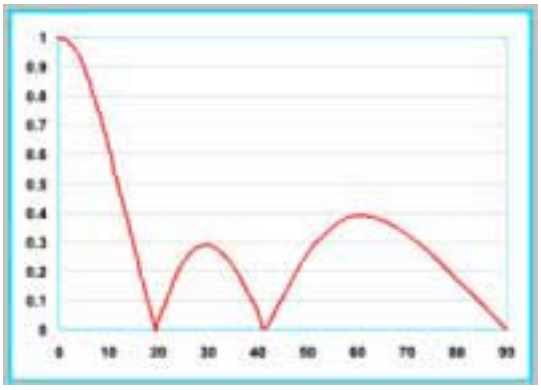
2-Bay, Full-Wave-Spaced

Power Gain:

6014, 6015, 6800-series: 0.99 (-0.05 dB)

6600-series: 1.98 (2.95 dB)

6500-series: 1.98 (2.95 dB)



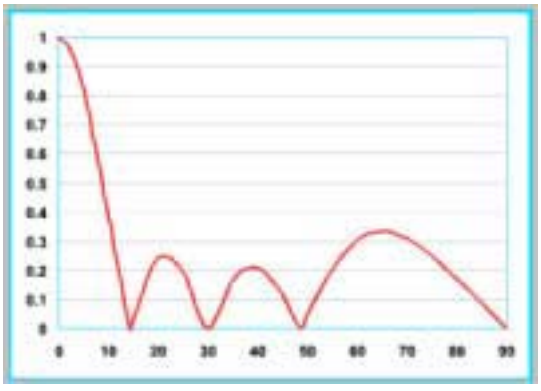
3-Bay, Full-Wave-Spaced

Power Gain:

6014, 6015, 6800-series: 1.55 (1.90 dB)

6600-series: 3.10 (4.90 dB)

6500-series: 3.10 (4.90 dB)



4-Bay, Full-Wave-Spaced

Power Gain:

6014, 6015, 6800-series: 2.12 (3.26 dB)

6600-series: 4.24 (6.26 dB)

6500-series: 4.24 (6.26 dB)

Document No. tb-elevation_patterns_full-wave (0112)

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