

## **EXHIBIT 10D**

### **DISCUSSION OF ENVIRONMENTAL CONSIDERATIONS**

The permittee, Baker Broadcasting, LLC, has installed its directional antenna system to the side of a steel pole, which is mounted atop an existing steel lattice tower. The site is located on Turquoise Mountain, San Bernardino County, California.

The supporting structure has an overall height of 12.2 meters above ground. The antenna system was custom designed and built by SWR Inc., and is a Model No. FM3/2 DA, two-bay,  $\lambda$ -spaced-element, circularly-polarized, directional antenna system with the center of radiation 10.7 meters above ground. The facility has been constructed and is ready to begin operation with a maximum effective radiated power of 1.4 kW.

#### **I. RADIO FREQUENCY FIELDS**

In accordance with FCC rules, the worst-case power density in  $\text{mW}/\text{cm}^2$  has been calculated using equation three of Section 2 of the Office of Engineering & Technology Bulletin No. 65 entitled, *Evaluating Compliance With FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*. Equation three has been reduced so the constant reflects both the factor 1.64 used to obtain ERP relative to EIRP and the factor 1000 for the number of milliwatts/watt. Further consideration includes the Environmental Protection Agency (“EPA”) recommendation that a more realistic approximation should include ground reflection by assuming a maximum 1.6-fold increase in field strength or an increase in power density of  $1.6^2$  (2.56).

Based on recommendations of the American National Standards Institute (“ANSI”), Institute of Electrical and Electronics Engineers (“IEEE”), and the National Council on Radiation Protection and Measurements (“NCRP”), the Federal Communications Commission (“FCC”) has established maximum permissible exposure (“MPE”) limits. The limits are  $1.0 \text{ mW}/\text{cm}^2$  for occupational/controlled environments, averaged over any 6-minute period, and  $0.2 \text{ mW}/\text{cm}^2$  for general population/uncontrolled environments, averaged over any 30-minute period. These limits apply over the radio frequency band from 30 to 300 Megahertz.

In the aforementioned report, reference is made to studies conducted by the EPA in which a mathematical model of antenna behavior was developed to predict the required distance from the antenna radiation center to the bottom of the antenna supporting structure so the FCC limit will not be exceeded anywhere on the ground. By reference to the tabulated values in Supplement A to OET Bulletin 65, Section 2, Tables 5 and 6, it was determined that a maximum “worst case” distance of 9.8 meters

would be required for an occupational/controlled area, and 18.5 meters for a general population/uncontrolled environment. These figures are for a simple dipole element antenna with an effective radiated power of 2.80 kilowatts (the sum of horizontally- and vertically-polarized power). Typical “best case” distances are 5.6 and 9.7 meters, respectively, using modern, commercially-available antennas.

The following graph depicts the predicted power density two meters above ground as a function of horizontal distance from the base of the tower, based on the vertical radiation characteristics of the two-element,  $\lambda$ -spaced antenna system. The vertical pattern data were provided by the manufacturer and are shown graphically in exhibit 10A. The following figure shows that the facility will produce a power density that is well below the standards for occupational/controlled environments.

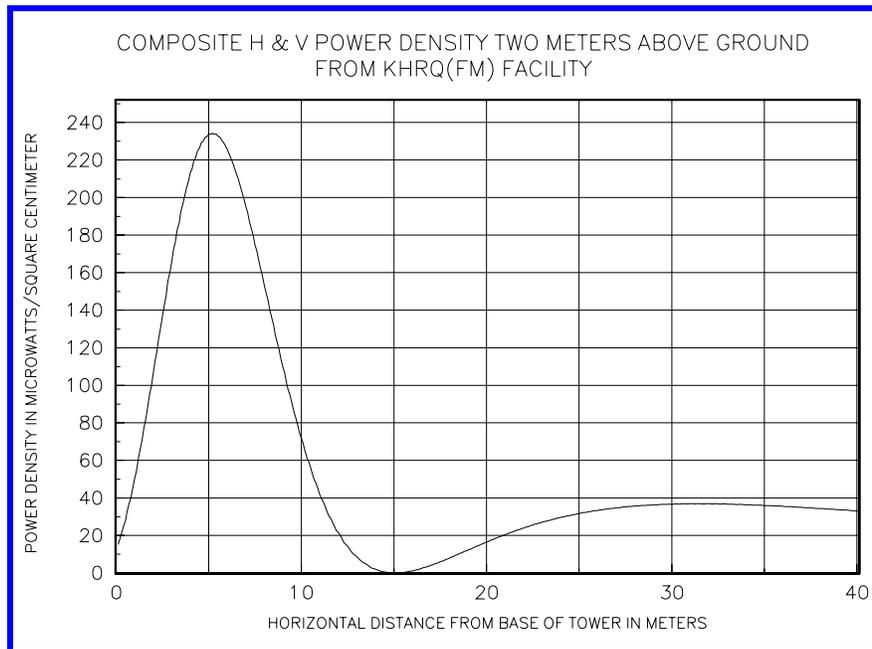


Figure 1

However, the power density predicted over a distance range from 3.6 to 6.8 meters from the base of the supporting structure exceeds slightly the standard that applies to a general public/uncontrolled environment. Site access is limited by a locked gate and only authorized personnel are permitted entry. The site is well marked with signs indicating the danger of unauthorized entry.

Protection to station workers and the general public is accomplished in several ways. First, site access is restricted only to authorized persons working for the various users at the communications site, and the entry gate is maintained in a locked

condition, which discourages casual public access to the facilities. To warn the public of possible danger from radio frequency emissions, the area around the tower has been marked with warning signs that comply with the ANSI standard C95.2-1982 Radio Frequency Radiation Hazard Warning Symbol. Also, when maintenance is to be performed on the antenna or supporting structure, the station will reduce power or cease operation completely as necessary until such work has been completed and the workers are no longer on the tower.

## **II. CONCLUSION**

Human exposure to radio frequency emissions will not exceed the maximum levels established by the Federal Communications Commission based on predictions employing the vertical radiation characteristics of the KHRQ(FM) two-element,  $\lambda$ -spaced antenna, and restriction of access to the site by the general population.

Therefore, it is concluded that the KHRQ(FM) facility, as constructed, does not significantly affect the quality of the human environment and that an environmental assessment as described in Part 1, Subpart I, of the Commission's Rules is not required. Furthermore, the facility is not classified as having a significant impact upon the environment as defined in § 1.1305 and § 1.1307 of the Commission's Rules and Regulations.



**Lawrence L. Morton, P.E.**  
**Consulting Telecommunications Engineer**  
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