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Engineering Statement KPFA NIER Study Grizzly Peak Electronic Site

Introduction

As a part of the renewal of license for KPFA (BLED-19791108AE), a comprehensive calculated analysis of the KPFA electronic site was undertaken to determine compliance with the requirements of OET Bulletin 65, Edition 97-01, and other applicable FCC rules, as needed. As the site has only one full-time FM broadcast station, and one other auxiliary broadcast facility, the RFR level from KPFA was calculated along with a worst-case scenario with the auxiliary facility (KLLC - BLH-19960111KK) also in operation. KPFA also has an auxiliary facility authorized at the site, but because it only operates at times when maintenance is performed on the main KPFA facility, for the purposes of this study, it is not considered as combined with the operation of KPFA. A separate discussion of the KPFA auxiliary facility is included below.

Analysis

The calculated cumulative RF level at the site was determined using each individual station power level, antenna model and effective radiated power, and the sum added together for the total. The FCC FM Model program was utilized to determine individual NIER levels for KPFA and the auxiliary KLLC facilities.

KPFA uses a 6-bay, full-wave spaced ERI SHPX-6AE antenna, mounted at 84 meters above ground (center of radiation). The following table of results illustrates compliance with FCC RFR rules at the KPFA (Grizzly Peak) transmitter site.

<u>Facility</u>	<u>Calculated Maximum RFR Level</u>	<u>% of Public limit</u>
KPFA	40.02 μ w/sq. centimeter @ 26 meters	20%
KLLC	65.49 μ w/sq. centimeter @ 17 meters	33%
<u>Total Percentage of public RFR limitation:</u>		53%

Based upon these calculations, the electromagnetic broadcast operations at the site do not exceed the public limit for RF emissions, as specified by the FCC Rules at the KPFA electronic site, even when the KLLC auxiliary facility is in operation. Access is restricted by secure fencing to persons having permission to access the site. The site is posted with RF Warning signs.

During the rare times when the auxiliary KPFA facility is in operation, a small portion of the site exceeds both the public and occupied calculated limits at a distance of 4 meters from the tower. The calculated levels fall below the public limit at about 10 meters from the tower. As the main portion of the transmitter building is about 10 meters distant from the base of the tower, compliance with RFR rules is achieved. The auxiliary transmitter system has interconnected automatic warning devices that provide a visual warning light and illuminated signage in the area inside the 10 meter distance from the tower. At no time is the general public allowed on site, and all transmitter personnel are trained in proper RFR procedures for the site.

<u>Facility</u>	<u>Calculated Maximum RFR Level</u>	<u>% of Public limit</u>
KPFA Aux	1384 μ w/sq. centimeter @ 4 meters	690%
KPFA Aux	152 μ w/sq. centimeter @ 10 meters	76%

Conclusion

Based upon the forgoing calculations, the Licensee of KPFA is confident that the KPFA electronic site, and the operations of the KPFA main transmitter in particular, are well within the FCC limits for exposure to RF emissions. The combined KPFA main and KLLC auxiliary facility are also well within the FCC limits for exposure to RF emissions. The KPFA auxiliary facility is in compliance with RFR rules at a distance of 10 meters from the tower, and proper signage, warning signals and procedures are already in place for the rare times that the KPFA auxiliary facility is in operation.

In summary, the Grizzly Peak electronic site, and the operation of KPFA in particular is in compliance with the FCC and ANSI rules concerning RF exposure to the general public.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Mussell Jr.', with a stylized, cursive flourish at the end.

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