

MINOR CHANGE APPLICATION
THRESHOLD COMMUNICATIONS
K290BF FM TRANSLATOR STATION
CH 287D - 105.3 MHZ - 0.008 KW
MODESTO, CALIFORNIA
July 2010

EXHIBIT C

Radio Frequency Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers nearby stations, specifically the co-located KPSR-LP, and utilizes the appropriate formulas contained in the OET Bulletin.¹

The proposed /existing K290BF translator is located on a tower mounted atop a building in downtown Modesto. The building extends 25.6 meters (84.0 feet) above ground, with an elevator penthouse extending another 3.5 meters (10 feet), making the building a total of 28.7 meters (94.0 feet) above ground. There are several towers above the roof. The tallest tower extends 30.5 meters (100 feet) above the roof, including appurtenances,. Therefore, calculations for the broadcast facilities will be made based on exposure levels on the roof of the elevator penthouse rather than at ground level.

The proposed K290BF antenna system is to be mounted with its center of radiation 17.1 meters (56.0 feet) above the roof of the elevator penthouse and will operate with an effective

1) The FMModel Program was used for all calculations for the FM station contributions. The EPA single bay dipole antenna was used unless otherwise noted.

radiated power of 0.008 kilowatt in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the roof of the elevator penthouse at the base of the tower, the height of an average person, the proposed K290BF antenna system will contribute 0.0014 mw/cm^2 .² Based on exposure limitations for a controlled environment, 0.1% of the allowable ANSI limit is reached at 2.0 meters above the elevator penthouse at the base of the tower. For uncontrolled environments, 0.7% of the ANSI limit is reached at 2.0 meters above the roof of the elevator penthouse at the base of the tower.

The authorized KPSR-LP antenna system is mounted with its center of radiation 16.6 meters (54.3 feet) above the roof of the elevator penthouse and operates with an effective radiated power of 0.035 kilowatt in the horizontal and vertical planes (circularly polarized).³ At 2.0 meters above the roof of the elevator penthouse at the base of the tower, the height of an average person, the authorized KPSR-LP antenna system contributes 0.0066 mw/cm^2 .⁴ Based on exposure limitations for a controlled environment, 0.7% of the allowable ANSI limit is reached at 2.0 meters above the elevator penthouse at the base of the tower. For uncontrolled environments, 3.3% of the ANSI limit is reached at 2.0 meters above the roof of the elevator penthouse at the base of the tower.

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- 2) This level of field occurs at 4.0 meters out from the base of the tower on top of the roof and is considered worst case.
 - 3) The center of radiation above mean sea level for KPSR-LP was used to calculate the height of the antenna above the elevator penthouse roof.
 - 4) See Footnote #2, supra.

Combining the contributions of K290BF and KPSR-LP, a total of 4.0% is reached at 2.0 meters above the roof of the elevator penthouse roof. Since this level for uncontrolled environments is well below the limit as defined by the Commission, the proposed K290BF facility is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, TC will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the location. Additionally, TC will reduce the power of the facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.