

Site Selection and RF Energy Exposure

prepared 01/17/2019 for

UniMas Partnership of Phoenix

K16FB-D Globe, AZ

Ch 18 10 kW-DA 1001 m

This application proposes continued use of a multiple-use communications tower owned by the applicant, located on Pinal Peak, south of Globe. The only external construction is the replacement of the antenna and transmission line. Use of currently utilized, shared sites is environmentally preferred.

Operation on channel 18, with its center frequency of 497 MHz, implies a radiofrequency radiation exposure guideline value of $331 \mu\text{W}/\text{cm}^2$ for the “uncontrolled” areas. The proposed RFS PEPL-3A antenna will have its radiation center 28 meters above ground level, with vertically polarized ERP at 33% of the 10 kW horizontally polarized ERP. The maximum downward radiation value, at depression angles greater than 35° , does not exceed 0.09. Consequently, the worst-case predicted exposure level at 2 meters above ground level is $5.3 \mu\text{W}/\text{cm}^2$. This exposure level is 1.6% of the guideline value, under the 5% “responsibility threshold”. The site is a remote, forested mountaintop, with access to the tower base is restricted by fencing and marked by appropriate warning signs. The applicant recognizes its responsibility to reduce power or interrupt operation during tower work, to ensure safe working conditions for rigging personnel.



Karl D. Lahm, P.E.
California Registration #E010307
Broadcast Transmission Services, LLC
P.O. Box 147
Rapid City, MI 49676
312.961.6256