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Prepared for Big River Public Broadcasting Corp.
KIYU-FM, Galena, Alaska

RADIOFREQUENCY FIELDS

An engineering analysis was performed to determine whether the facilities proposed herein comply with the Maximum Permissible Exposure standards outlined in 47CFR1.1310 as regards human exposure to radiofrequency electromagnetic fields and whether environmental processing would be required.

The applicant proposes to operate at 0.09 kilowatts circularly polarized, using a Bext TFC2K antenna mounted at the 21-meter level of an existing 23-meter tower. The antenna support structure is attached to the two-story studio building and is located in generally flat terrain. This antenna consists of a single radiating. The floor level of the highest occupied area of the building is 6 m AGL.

An application for a new Class D facility is being contemporaneously filed and, other than that, there are no significant emitters of radiofrequency energy in the immediate vicinity. The base of the tower accessible to the general public.

The Commission's FMModel computer software was used to calculate the radiofrequency electromagnetic power density in a plane 2 meters above the level of the highest occupied area of the building as a function of the distance from the antenna support structure. The TFC2K is an opposed V-dipole type element, which elevation pattern data was selected. A copy of the graphical output of this program is attached.

The highest power density occurs at a point 13.5 meters from the base of the tower and is equal to $9.8 \mu\text{W}/\text{cm}^2$. This represents 4.9% of the general public/uncontrolled MPE standard.

Because this is less than 5% of the appropriate MPE standard, the applicant's contribution to the ambient radiofrequency electromagnetic power density need not be considered in calculations by others, nor would the applicant be required to participate in any remediative actions that might be necessary were it determined that the MPE standard was exceeded in areas due to the operation of others.

Appropriate signs will be installed at the base of the tower warning workers and others that the maximum permissible exposure standard may be exceeded at locations on the tower.

The applicant believes that the facilities proposed herein conform to the MPE standards outlined in 47CFR1.1310 and that environmental processing is not warranted.

