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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 0.25 kilowatts, circularly polarized, using a Bext TFC2K antenna mounted at the 17.5-meter level of 23.2-meter tower surmounting the mechanical penthouse of the 50.6-meter Federal Office Building in downtown Juneau, Alaska. The radiation center is 77.1 meters AGL. This antenna consists of four, circularly polarized radiating elements spaced 0.755 wavelengths apart.

The point of closest approach to the antenna is directly beneath it on the roof of the mechanical penthouse. Access to the roof of the penthouse is through a locked roof hatch only. The proposed facility shares thesame antenna support structure with KTOO-FM, Juneau, Alaska, and the facilities of K269AO.

The Commission's FMModel computer software was used to calculate the radiofrequency electromagnetic power density in a plane 2 meters above the penthouse roof as a function of the distance from the antenna support structure. A copy of the graphical output of this program is attached.

The Bext TFC2K is electrically identical to the Jampro Penetrator style element, which elevation pattern data was used.

The highest power density occurs at a point 10.4 meters from the base of the tower and is equal to 1.3 µW/cm^2. This represents 0.65% of the general public/uncontrolled MPE standard.

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

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.

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