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Prepared for the University of Montana
New NCE, Thompson Falls, Montana

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 1.25 kilowatts, circularly polarized, using a Bext TFC2K antenna mounted at the 10-meter level of an existing 15-meter tower. This antenna consists of four radiating elements spaced 0.75 wavelength apart.

The antenna support structure is located on a local promontory. There are no other significant emitters of radiofrequency energy in the immediate vicinity. The base of the tower is 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 AGL as a function of the distance from the antenna support structure. The Bext TFC2K antenna is an "Opposed V-Dipole" style 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 14 meters from the base of the tower and is equal to $28.3 \mu\text{W}/\text{cm}^2$. This represents 14.2% of the general public/uncontrolled MPE standard.

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.

