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Prepared for the University of Montana
New NCE, White Sulphur Springs, 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 0.25 kilowatts, circularly polarized, using a Bext TFC2K antenna mounted at the 6-meter level of an existing 9-meter pole. This antenna consists of three radiating elements spaced 0.575 wavelengths apart.

The antenna support structure is located at the apex of a local promontory. There are several stations in the Digital Television Translator service located at the same site 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 12 meters from the base of the tower and is equal to 39.8 μW/cm^2. This represents 19.9% of the general public/uncontrolled MPE standard.

Because of the confounding effect of the other transmitters, the applicant proposes to make post construction measurements of the ambient radiofrequency field in order to assess compliance with the MPE standard set out in 47CFR.1310.

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.