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Historic Oxford
New NCE, Trappe, Maryland

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 3.85 kilowatts, circularly polarized, using a Shively 6810-4/DA/SS.75 antenna mounted at the 47-meter level of an existing 49-meter tower. This antenna consists of four radiating elements spaced 0.75 wavelengths apart.

The antenna support structure is located in generally flat terrain. There are no other significant emitters of radiofrequency energy in the immediate vicinity. The base of the tower is enclosed in a locked and fenced compound, but areas outside of the compound are 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 "Ring and Stub or Other" elevation pattern data was selected. A copy of the graphical output of this program is attached.

The highest power density occurs at a point 28 meters from the base of the tower and is equal to $5.2 \mu\text{W}/\text{cm}^2$. This represents 2.6% 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.

