R.F. RADIATION COMPLIANCE STATEMENT

Wisconsin ECB
January 2008

We have chosen to use worst case calculations shown below which were derived from the formulas in the OET 65 bulletins as updated. The proposed 1.95 kW facility will operate at an antenna height of 193.5 meters above ground. At head height (2 meters) this station will produce a power density of 3.0 microwatts per square centimeter which amounts to 0.18 % for a controlled environment and 0.91% for an uncontrolled environment.

The WHND(FM) antenna:

The tower site is also the location for the antenna of WHND-FM. This station transmits with circular polarization from an antenna height above ground of 109.6 Meters at an ERP of 3.4 kW. Using OET 65 worst case calculations we find that this station will produce 19.6 microwatts per square centimeter at a head height of two meters. This amounts to 1.96 % of the maximum for a controlled environment and 9.8% for an uncontrolled environment.

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The WHDI (FM) antenna:

This antenna transmits from a height above ground of 90.6 meters above ground with an ERP of 3.4 kW. Based on OET calculations under worst case we find that this station contributes 28.9 microwatt per square centimeter at head height. This amounts to 2.9 % of the maximum for a controlled environment and 14.5 % for an uncontrolled environment.

Other Emitters:

A search of the ULS database based on tower registration number produced the following stations that are licensed to the site: KNDM579, WPXK234, WPMN661, KIA254, KVW847, KFA417, KNHF808 and KFA417. Additional research indicates that all of these stations are exempt from further study either because of their ERP or antenna height and often both.

The tower is also the location of U.S. Weather transmitter WXN69. This station transmits on 162.42 MHz with 7.18 kW of power radiated by its vertically polarized 8-bay antenna which is 137.3 meters above ground. Using the OET we calculate that this station contributes 5.13 microwatts per square centimeter which is 2.56 percent for an uncontrolled area and 0.53 percent for a controlled area.

Total calculated R.F. emissions:

Together the three broadcast antennas produce a total of 5.57 % of the maximum allowed for a controlled environment and 27.8% for an uncontrolled environment.

Note that in this case, the FM antennas were calculated under “worst case”, when in fact, the power densities will be significantly less at the nadir due to the higher gains used by the antennas which reduce the emissions in the downward direction.

The State of Wisconsin ECB will reduce power to safe levels or terminate transmissions in the event a worker must go on to the tower and be at a distance from one or more of the radiators such that over exposure would result.

Consequently, it appears that the proposed transmitter site will be in full compliance with the Commission's human exposure to radio frequency electromagnetic field rules and regulations.

Doug Vernier