R.F. RADIATION COMPLIANCE STATEMENT

State Of Wisconsin - Educational Communications Board

May 2014

WHND

The proposed tower site is fenced, gated and kept locked so the public exposure at the environment is controlled. This station transmits from an antenna height above ground of 107 meters at an ERP of 22 kW. Using OET 65 worst case calculations, we find that this station will produce 133.3 microwatts per square centimeter at head height, which is 13.3 percent of the maximum for the controlled environment.

The WHDI (FM) antenna*:*

WHDI also transmits from this same tower and antenna (WHND and WHDI are diplexed into a shared antenna) using 11 kW at an antenna height of 107meters above ground. At head height, this amounts to 66.6 microwatts per square centimeter, which is 6.7 percent of the maximum for a controlled environment.

The W15DJ antenna:

The tower site also has the antenna of TV translator W15DJ. This station transmits from an antenna height of 150.6 Meters at an ERP of 3.9 kW. Using OET 65 worst case calculations (without regard to the attenuation of the antenna's vertical elevation field at the nadir), we find that this station produces 5.9 microwatts per square centimeter at a head height of two meters. This amounts to 0.37% of the maximum for the controlled environment.

WXN-69 Weather Station

WXN-69 transmits on 162.425 MHz with an ERP of 4.5 kW from an antenna height above ground of 137 meters. Therefore, at head height this station produces 3.13 microwatts per square centimeter, which is 0.313 percent of the maximum for the frequency in use.

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Total calculated R.F. emissions:

Together the three broadcast antennas and one weather station antenna produce a total of 20.7% of the maximum allowed for a controlled environment. Note that the FM and TV antennas were calculated under “worst case”, when in fact, the power densities will be significantly less at the nadir due to the higher gains of the multi-bay antennas which reduce the emissions in the downward direction.

The State of Wisconsin - Educational Communications Board 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.

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