

**MINOR CHANGE APPLICATION**  
**CUMULUS LICENSING LLC**  
**WNAM AM RADIO STATION**  
**has: 1280 kHz - 5.0 kW - DA2**  
**req: 1280 kHz - 5.0/50.0 kW - DA2**  
**NEENAH-MENASHA, WISCONSIN**  
**February 2009**

**EXHIBIT #3**

**Radio Frequency Assessment**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations, specifically WWXX (FM), and utilizes the appropriate formulas contained in the OET Bulletin. WWXX (FM), Channel 245A, Oshkosh, Wisconsin is located on the tallest structure (Tower #2) in the WNAM array.<sup>1</sup>

For the radio frequency radiation calculations, it is assumed that each tower of the WNAM directional array will carry the full 50.0 kilowatts of power. A fence will surround each of the AM radiators at a distance no closer than 5.0 meters (16.4 feet) from the radiating structure.

Tower #2 of the WNAM array (tallest tower) will operate at 1280 kHz with a 152°, electrically, tower and a power of 50.0 kilowatts. At 5.0 meters from the structure, the WNAM radiator contributes an electric field of 333.0 V/m and a magnetic field of 0.518 A/m. Since

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1) The contribution of WWXX FM is calculated using the FM Model program. A single bay EPA dipole antenna was used for calculation purposes, unless otherwise noted.

WNAM operates below 1340 kHz, the contribution levels for controlled and uncontrolled environments are the same. This results in an electric field contribution of 54.2% of the maximum 614 V/m and a magnetic field contribution of 31.8% of the maximum 1.63 A/m. Since the electric field contribution is the highest, it is considered worst case for Tower #2 of the WNAM array.

Towers #1, #3 and #4 of the WNAM array will operate at 1280 kHz with 90°, electrically, towers with 50.0 kilowatts of power. At 5.0 meters from the structure, the WNAM towers will delivery 91.9 V/m electric field and 1.131 A/m magnetic field. These contributions represent 15% of the controlled and uncontrolled electric field limit of 614 V/m and 69.4% of the controlled and uncontrolled magnetic field limit of 1.63 A/m at the fence. Since the magnetic field contribution is the highest, it is considered worst case for Towers #1, #3 and #4 of the WNAM array.

The WWWW-FM antenna system is mounted with its center of radiation 95 meters (312 feet) above the ground on Tower #2 and operates with an effective radiated power of 6.0 kilowatts in the horizontal and vertical planes (circularly polarized). At 2.0 meters, the height of an average person, above the ground at the base of the proposed tower, the WWWW-FM antenna system will contribute 0.028 mw.<sup>2</sup> Based on exposure limitations for a controlled environment, 2.8% of the allowable limit is reached at 2.0 meters above the ground at the base of the proposed tower. For uncontrolled environments, 14.0% of the limit is reached at 2.0 meters above the ground at the base of Tower #2 of the WNAM directional array.

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2) This level of field occurs at 25.0 meters out from the base of the tower and is considered worst case.

Combining the contribution of WNAM and WWWX, the worst case level of contribution at the perimeter of the fenced area surrounding each tower is 83.4%. Since this level for uncontrolled environments is below the 100% limit defined by the Commission, the proposed WNAM facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Cumulus will insure warning signs are posted in the vicinity of the towers warning of potential radio frequency radiation hazards at the site. In addition, Cumulus will reduce the power of the proposed facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.