

## **R.F. EXPOSURE COMPLIANCE STATEMENT**

Wisconsin ECB  
September 2018

### ***WHLA(FM) antenna:***

We have chosen to use the FCC's online FM Model Calculator to calculate the RF exposure contributions of this antenna. The WHLA(FM) antenna operates on channel 212 (90.3MHz) with a maximum ERP of 100kW (circular) at an antenna height of 203 meters. According to FM Model Calculator, at head height (2 meters) this station produces a maximum power density of 14.78 microwatts per square centimeter at locations 38 meters from the tower base, which amounts to 1.48% of the Maximum Permissible Exposure (MPE) for a controlled environment, and 7.39% MPE for an uncontrolled environment.

### ***WHLA(FM)auxiliary antenna:***

This antenna's operation is mutually exclusive WHLA(FM)'s operation via its main antenna. We have chosen to use the FCC's online FM Model Calculator to calculate the RF exposure contributions of this antenna. The WHLA auxiliary antenna operates on channel 212 (90.3MHz), with an ERP of 3.78kW (circular) at an antenna height of 165 meters above ground. At head height (2 meters) this station will produce a maximum power density of 1.83 microwatts per square centimeter at locations 91 meters from the tower base, which amounts to .18% of the MPE for a controlled environment and .92% for an uncontrolled environment.

### ***WHLA-TV antenna:***

The tower supports the antenna of WHLA-TV, which operates on channel 15 (479 MHz). This station transmits from an antenna height of 243 meters at an ERP of 218kW (Horizontal polarization) and 43.6kW (Vertical polarization). Using OET 65 worst case calculations (field factor = 1) we find that this station will produce 150.4 microwatts per square centimeter at a head height of two meters. This amounts to a worse case of 9.4% of the maximum for a controlled environment and 47 % for an uncontrolled environment.

### ***WHLA-TV auxiliary antenna:***

This antenna's operation is mutually exclusive WHLA-TV's operation via its main antenna. The WHLA-TV auxiliary antenna height is 183 meters and operates at a power of 100kW (Horizontal polarization only) on channel 15 (479MHz). Using OET 65 worst case calculations (field factor = 1) we find that this station produces 101.9 microwatts per square centimeter at a head height of two meters. This amounts to 6.4% of the maximum for a controlled environment, and 31.9% for an uncontrolled environment.

### ***WLSU antenna:***

The WLSU antenna is also on this tower. We have chosen to use the FCC's online FM Model Calculator to calculate the RF exposure contributions of this antenna. WLSU operates on 88.9MHz at an ERP of 8.2kW (circular) and an antenna height of 175 meters. At head height (2 meters) this station will produce a maximum power density of 2.91 microwatts per square centimeter at locations 80 meters from the tower base, which amounts to .29% of the MPE for a controlled environment and 1.46% for an uncontrolled environment.

***Total calculated R.F. emissions:***

	WHLA-TV (main)*	WHLA-TV (Aux) *	WHLA(FM)	WLSU	Totals
% Controlled Environment	9.40%		1.48%	0.29%	11.17%
% Uncontrolled Environment	47.00%		7.39%	1.46%	55.85%
% Controlled Environment		6.40%	1.48%	0.29%	8.17%
% Uncontrolled Environment		31.90%	7.39%	1.46%	40.75%
* worst case, field factor = 1					

The State of Wisconsin ECB will reduce power to safe levels or terminate transmissions in the event a worker must go on 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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