

WILLIAMSPORT LYCOMING BROADCAST FOUNDATION
FM Radio Station WPTC
Williamsport, PA
CH201A (88.1 MHz), 0.5 kW, -94.6m EHAAT

ENGINEERING STATEMENT

This engineering statement was prepared on behalf of Williamsport Lycoming Broadcast Foundation, licensee of WPTC (FCC ID #52188). This engineering brief addresses questions of RF power density within the building on which the WPTC antenna is mounted.

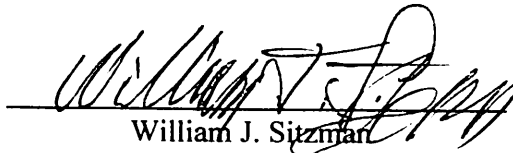
ENVIRONMENTAL CONSIDERATIONS

This was addressed in FCC Docket # 93-62, released August 1, 1996. Table 1(A) on Page 67 of the document depicts the ANSI/IEEE C95.1-1992 (IEEE C95.1-1991) protection requirements. The maximum permissible exposure for the uncontrolled environment in the 30 to 300 MHz spectrum is a power density of 0.2 milliwatt per centimeter squared (mw/cm^2).

Since the licensee has installed a Shively 6812-2 two-bay circularly polarized antenna, the vertical elevation pattern of that antenna has been used in determining the effective radiated power density below the horizon toward all areas below the antenna. The antenna radiation centre is 5.5 meters above the roof. The point at which the RF power density decreases to less than $0.2 \text{ mw}/\text{cm}^2$ is 1.2 meters below the roof and has a 3 meter radius. Directly below the antenna, under the roof, is an abandoned smokestack surrounded by a locked room with no occupants. Further, the floor of the top story is 2 meters below the $0.2 \text{ mw}/\text{cm}^2$ power density, which will preclude any person from being exposed to that level of non-ionizing radiation. Given that the building has a paved metal roof, the power density below it would obtain considerably less than this worst-case value. Hence this proposal is well within the $0.2 \text{ mw}/\text{cm}^2$ limit for the uncontrolled environment.

Should any maintenance worker require access to the roof, the applicant will either reduce power or cease operation until workers are inside the building. Appropriate RF warning signs exist at the antenna mast and it may be assumed that there will be no significant effect on the human environment with regard to exposure of the general public

March 17, 2015


William J. Sitzman
Consulting Radio Engineer