

TECHNICAL EXHIBIT  
CONCERNING HUMAN EXPOSURE TO RF ELECTROMAGNETIC ENERGY  
PREPARED FOR  
STATION WLII-DT  
CAGUAS, PUERTO RICO  
CH 11 38 KW-DA 355 M

Technical Statement

The proposed facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 64 meters above ground level. The total DTV ERP is 76 kW-DA (circular polarization). A “worst-case” vertical plane relative field value of 0.1 (for angles below 60 degrees downward) is assumed for the antenna's downward radiation (see Figure 3 attached). The calculated power density at a point 2 meters above ground level is  $0.0066 \text{ mW/cm}^2$ . This is 3.3% of the FCC's recommended limit of  $0.2 \text{ mW/cm}^2$  for channel 11 for an “uncontrolled” environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site is restricted by fencing and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a protocol is in effect with the other stations in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing “accepted” RFR protective clothing and/or RFR exposure monitors.

Finally, it is noted that this technical exhibit only addresses the potential for radio frequency electromagnetic field exposure. All other aspects of the

environmental processing analysis have already has been provided to the FCC by the tower owner as part of the tower registration process.



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## ELEVATION PATTERN

The graph displays the normalized power spectrum of a 1000 Hz sinusoidal signal. The x-axis represents the angle in degrees below the horizontal, ranging from -10 to 90. The y-axis represents the normalized power, ranging from 0 to 1. The curve starts at approximately 0.15 at -10 degrees, reaches a local maximum of about 0.27 at -4 degrees, and then a global maximum of 1.0 at 0 degrees. For positive angles, the power decays with oscillations, with local maxima around 0.27 at 6 degrees, 0.16 at 11 degrees, and subsequent smaller peaks that gradually decrease in amplitude towards 90 degrees.

Remarks: