



### **WLPN-LP Exhibit 5**

The specified transmitter power output produces the authorized effective radiated power. Working backwards from the specified antenna to the transmitter, this exhibit will provide the basis for this statement.

The antenna utilized is an SWR FMEC-1. The custom specified antenna has a maximum power gain of 0.441 as specified by the manufacturer. The antenna input power to achieve the desired 17 Watts effective radiated power is 39 Watts.

The transmission line utilized by this facility consists of 269 feet of Commscope LDF4-50A. For this length of line the total loss based on manufacture's specifications is 1.7771938dB with a fractional efficiency of 0.664092. This therefore results in an input power to the transmission line of 59 Watts.

Directly following the main run of Commscope LDF4-50A is Polyphasor IS-50NX-C0 with an Insertion Loss of -0.1dB and a fractional efficiency of 0.977237. This results in a needed input power to the Polyphasor of 60.5 Watts

Directly following the Polyphasor IS-50NX-C0 is a 3 foot Andrew FSJ4-50B SureFlex Jumper with interface types N Male and 7-16 DIN Male. This jumper has an insertion loss of 0.01983 dB. This therefore results in an input power to this jumper of 61 Watts. This jumper is connected directly to the output of the FM transmitter. This therefore results in the transmitter power output of 61 Watts.