

**Exhibit E-12**

The specified transmitter power output produces the authorized effective radiated power. This exhibit provides demonstrates the calculations utilized to arrive at the transmitter power output.

The specified transmitter power output is 138 Watts. The transmission line utilized by the facility is ½" foam dielectric semi-flexible coaxial cable. The length of this line utilized is 140.1 feet. Based on software from the transmission line manufacturer, at the frequency of operation this length of transmission line has a fractional efficiency of 0.8093.

The input power to the antenna is therefore 112 Watts. The antenna utilized by the facility is a Shively Labs 6812-3 model. The manufacturer specifies the power gain of this antenna as 1.52. The effective radiated power is therefore 170 Watts, or 0.17 kW, which is the authorized effective radiated power.