TENDRIL GATEWAY

EXHIBIT. MPE CALCULATIONS

The following MPE calculations are based on a 2.4 GHz whip antenna, and conducted RF power of +20.03 dBm as presented to the antenna. The manufacturer-declared gain of this antenna, is 2.9 dBi.

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	20.03	(dBm)
Maximum peak output power at antenna input terminal:	100.693	(mW)
Antenna gain(typical):	2.9	(dBi)
Maximum antenna gain:	1.950	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2400	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)
Power density at prediction frequency:	0.039060	(mW/cm^2)
Maximum allowable antenna gain:	17.0	(dBi)
Margin of Compliance at 20 cm =	14.1	dB