MPE Evaluation Report

1. §1.1310, §2.1093 – RF EXPOSURE (MPE)

1.1. Standard Applicable

According to 1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Radio frequency radiation exposure was calculated based on § 1.1310 limits.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3–3.0	614	1.63	*(100)	30
3.0–30	824/f	2.19/f	*(180/f2)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

1.2. Test Data

Prediction of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG / 4\pi R^2$

S: Power density, in mW/cm^2

P: Power input to the antenna, in mW
G: numeric gain of the antenna
R: distance to the center of the antenna, in cm

The maximum power density for GSM850 is shown as below:

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated RF Exposure (mW/cm2)	Limit (mW/cm2)
1.2	1.32	32.7	1862.09	0.49	0.55

The maximum power density for PCS1900 is shown as below:

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated RF Exposure (mW/cm2)	Limit (mW/cm2)
1.2	1.32	30.5	1122.02	0.29	1

1.3. Test Result

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, Human proximity to the antenna shall not be less than 20cm(8 inches) during normal operation.