# 11. RF EXPOSURE STATEMENT

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

| Frequency range (MHz) | Electric field Strength (V/m) | Magnetic field Strength (A/m) | Power density ($mW/cm^2$) | Averaging time (minutes) |
|---|---|---|---|---|
| 0.3 - 1.34..... | 614 | 1.63 | *(100) | 30 |
| 1.34 - 30..... | 824/f | 2.19/f | *(180/ $f^2$) | 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

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

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

P = power input to 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

| | | |
|---|---|---|
| Max Peak output Power at antenna input terminal | 40.36 | dBm |
| Max Peak output Power at antenna input terminal | 10864.25624 | mW |
| Prediction distance | 300.000 | cm |
| Prediction frequency | 2608.00 | MHz |
| Antenna Gain(typical) | 17.0 | dBi |
| Antenna Gain(numeric) | 50.11872 | - |
| Power density at prediction frequency (S) | 0.48145 | $mW/cm^2$ |
| MPE limit for uncontrolled exposure at prediction frequency | 1.00000 | $mW/cm^2$ |

3. RESULTS

The power density level at 300 cm is 0.48145 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 2608 MHz.