



August 25, 2003

TCB
TÜV America Inc.
10040 Mesa Rim Rd.
San Diego, CA 92121

Dear Sir or Madam:

The following is the SAR calculation for the Digivance LRCS 1900 MHz System's Remote Unit using the system's maximum RF emission. The calculation is based on FCC 47CFR Part 2 and OET 65.

Per OET 65:

Maximum Permissible Exposure is $\text{Freq. (MHz)}/1500 = \text{MPE mW/cm}^2$
 $1850 \text{ MHz}/1500 = 1.233 \text{ mW/cm}^2$

The following equations determine the distance from the antenna that the power density is $\leq 1.233 \text{ mW/cm}^2$.

+46.50dBm Transmitter Power (Max)
13.50dBi Antenna Gain (Max)
 $46.50\text{dBm} + 13.50\text{dBi} = +60\text{dBm EIRP}$
 $+60\text{dBm EIRP} = 1000 \text{ Watts EIRP}$
 $1000 \text{ Watts EIRP} = 1000 \times 10^3 \text{ mWatts EIRP}$
 $1.233 \text{ mW/cm}^2 = 1000 \times 10^3 \text{ mW}/(4 \times \pi \times r^2)$
 $r = \text{SQR}(1000 \times 10^3 / 4 \times \pi \times 1.233)$
 $r = 254.05 \text{ cm or } 2.54 \text{ Meters}$

In addition, the following statement will be added to our installation/operation manual:

To comply with Maximum Permissible Exposure (MPE) requirements, the maximum composite output from the antenna cannot exceed 1000 Watts EIRP and the antenna must be permanently installed in a fixed location that provides at least 6 meters (20 feet) of separation from all persons.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Conyers", with a long, sweeping horizontal line extending to the right.

Dave Conyers
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