CC Maximum Permissible Exposure (MPE) limits for equipment operating in the frequency range 1500 – 100,000 MHz is 1.0 mW/cm2.

Following installation and commissioning, the safe distance from the antenna is the greater of:

20cm

Or

r cm, where $r = \sqrt{(PG/4\pi S)}$

P: power input to antenna(s) in mW

G: numeric gain of antenna relative to isotropic radiator

S: power density in mW/cm2 = 1.0 mW/cm^2

The safe distance from the antenna shall be the greater of:

20 cm or $\sqrt{(PG/4\pi S)}$

The maximum recommended antenna gain is 2dBi (1.58 linear)

The maximum permitted antenna gain is 14.5 dBi (28.18 linear)

Maximum transmit power is 22.5 dBm (inc. tune-up) or 178 mW

So

2dBi antenna: $r = \sqrt{(178*2.51/4*\pi*1)} = 4.73$ cm

14.5dBi antenna: $r = \sqrt{(178*2.51/4*\pi*1)} = 19.98$ cm

So, 20 cm is a suitable safe distance

<u>Power Density at 20cm:</u>

2dBi antenna: $S = PG/4\pi r^2 = 0.056$ mW/cm^2, which is less than the limit of 1.0 mW/cm^2

14.5dBi antenna: $S = PG/4\pi r^2 = 0.997$ mW/cm^2, which is less than the limit of 1.0 mW/cm^2