Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The transceiver is classified as fixed, the calculation was done to confirm a safe distance.

Limit for power density for general population/uncontrolled exposure is f/1500 mW/cm^2 for 300 – 1500 MHz frequency range:

P = 920/1500 = 0.61 mW/cm^2

The power density **$P\ (mW/cm^2) = P_T / 4\pi r^2$**, where

P_T is the transmitted power, which is equal to the peak transmitter output power plus maximum antenna gain. The maximum equivalent isotropically radiated power EIRP is

$$P_T = 44.48\ dBm + 2.15\ dBi - = 46.63\ dBm = 46025\ mW, \text{ where}$$

44.48 dBm is the EUT peak output power,
2.15 dBi – dipole antenna gain.

The minimum safe distance “r”, where RF exposure does not exceed FCC permissible limit, is

$$r = sqrt\ \{ P_T / (P x 4\pi)\} = sqrt\ \{46025 / 0.61 x 12.56\} = 77.5\ cm.$$

General public cannot be exposed to dangerous RF level.