Exhibit B

Response to Question 28 - Radiation Hazard Study

This attachment analyzes the power flux density near the transmit antenna. The antenna will be a parabolic 0.76m antenna with transmit gain 20.2 dBi.

The site will transmit a peak EIRP of 16.5 dBW. The power flux density calculations in this exhibit are based on this peak EIRP value. These calculations follow the methodology outlined in the FCC Office of Science and Technology Bulletin No. 65 "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation".

The power flux density calculations are made for a transmitting frequency of 1631.5 MHz. At this frequency the maximum permissible exposure to RF fields in a controlled environment is 5 mW/cm^2.

Far Field Calculations

The distance to the beginning of the far field, D_f for a circular aperture antenna is given by Equation 16 of OET Bulletin 65:

$$D_f = (0.6\ D^2) / \lambda$$

For an antenna size of 0.76 m, the far field distance is 1.9 m.

The maximum power density in the far field is given by (using Equation 4 of OET Bulletin 65):

$$P_d = EIRP/(4\pi\ D_f^2)$$

For a 0.76 m antenna, the maximum power density in the far field is 0.1 mW/cm^2.

The maximum power density for the near field, $P_d(nf)$ is given by Equation 13 of OET Bulletin 65:

$$P_d(nf) = 16\ \eta P_{RF} / (\pi\ D^2)$$

where P_{RF} = RF power input to the antenna
D = antenna diameter
η = aperture efficiency (60% used)

For a 0.76 m antenna, the maximum power density in the near field is 0.2 mW/cm^2.

Conclusion

This site is in a controlled environment. The general public does not have access to the site where the transmit antenna is located.

The maximum permissible exposure to RF fields in a controlled environment is 5 mW/cm^2 at L-band.

The calculations show that the site will not exceed the permissible levels for exposure to RF radiation.