

Exhibit C
to MOD to E000166
Dated 7 July, 2006

RADIATION CALCULATIONS FOR 0.74 meter EARTH STATION			
Nomenclature	Formula	Value	Unit
INPUT PARAMETERS			
M = Antenna Aperture Major Axis		0.93	meters
m = Antenna Aperture Minor Axis		0.67	meters
d = Diameter of Feed Mouth		0.035	meters
f = frequency		14.25	GHz
P = Max Power into Antenna		2.0	Watts
n = Aperture Efficiency		57%	
k = Wavelength @ 14.25 GHz		0.0210	meters
CALCULATED VALUES			
A = Area of Reflector	$\pi \times M \times m / 4$	0.489	meters ²
l = Length of Near Field	$M^2 / 4k$	10	meters
L = Beginning of Far Field	$0.6M^2 / k$	25	meters
G = Antenna Gain @ 30 GHz	$n(4 \times \pi \times A) / k^2$	7,922	(39.0) dBi
a = Area of Feed Mouth	$\pi \times d^2 / 4$	0.0010	meters ²
POWER DENSITY CALCULATIONS			
Region	Maximum Power Density in Region		Hazard Assessment (FCC MPE Limit = 1 mW/cm ²)
	Formula	Value (mW/cm ²)	
1 Near Field	$4nP/A$	0.93	< FCC MPE Limit
2 Far Field	$GP / (4(\pi)L^2)$	0.20	< FCC MPE Limit
3 Transition	$\leq N_r$ Fld Region	0.93	< FCC MPE Limit
4 Near Reflector Surface	$4P/A$	1.63	> FCC MPE Limit (See Exhibit A)
5 Between Reflector & Ground	P/A	0.41	< FCC MPE Limit