

Exhibit B  
Walgreens

RADIATION CALCULATIONS FOR 1.20 meter EARTH STATION			
Nomenclature	Formula	Value	Unit
INPUT PARAMETERS			
M = Antenna Aperture Major Axis		1.20	meters
m = Antenna Aperture Minor Axis		1.20	meters
d = Diameter of Feed Mouth		0.133	meters
f = frequency		14.25	GHz
P = Max Power into Antenna		2.0	Watts
n = Aperture Efficiency		63%	
k = Wavelength @ 14.25 GHz		0.0210	meters
CALCULATED VALUES			
A = Area of Reflector	$P \times M \times m / 4$	1.131	meters <sup>2</sup>
l = Length of Near Field	$M^2 / 4k$	17	meters
L = Beginning of Far Field	$0.6M^2 / k$	41	meters
G = Antenna Gain @ 14.25 GHz	$n(4 \times P \times A) / k^2$	20,230	(43.1) dBi
a = Area of Feed Mouth	$\pi \times d^2 / 4$	0.0140	meters <sup>2</sup>
POWER DENSITY CALCULATIONS			
Region	Maximum Power Density in Region		Hazard Assessment (FCC MPE Limit = 1 mW/cm <sup>2</sup> )
	Formula	Value (mW/cm <sup>2</sup> )	
1 Near Field	$4nP/A$	0.45	< FCC MPE Limit
2 Far Field	$GP / (4(\pi)L^2)$	0.19	< FCC MPE Limit
3 Transition	<= Nr Fld Region	0.45	< FCC MPE Limit
4 Near Reflector Surface	$4P/A$	0.71	< FCC MPE Limit
5 Between Reflector & Ground	$P/A$	0.18	< FCC MPE Limit
6 Between Reflector and Feed	$4P/a$	57.3	> FCC MPE Limit (See Exhibit A)