

Exhibit C

**Galaxy Broadband
Communications, Inc.
Form 312 Application
January 2010**

Radiation Hazard Exhibit

Galaxy Broadband Communications, Inc. (“Galaxy”) hereby applies to the Commission for authority to deploy via blanket licensing two types of VSAT remote terminals in the United States. This exhibit contains Galaxy’s radiation hazard exhibits in response to Question 28 on the FCC Form 312 application.

Prodelin 1134 Antenna (1.2 meter)

A radiation hazard analysis was done for a Prodelin 1.2 meter antenna and 2 Watts of power applied at the flange, using the methodology from OET Bulletin 65. The results of this analysis, which can be seen in Attachment 1 hereto, show that the maximum permissible exposure limit (MPE) for protection of the general public of 1 mW/cm^2 is met both in the far field, near field, transition zone and in the region between the reflector and the ground.

However, as is typical for all satellite antennas, the value of 1 mW/cm^2 is exceeded in the volume of space between the feed horn and the reflector. This region is not usually accessible to the general public because the units are typically installed on rooftops.

As a further protection mechanism, all VSAT terminals are equipped with an automatic shut-off mechanism which disables the transmitter should the receive signal be lost. This mechanism shuts the transmitter off within milliseconds should the receive carrier be blocked. This mechanism also ensures that a dish which has been accidentally re-pointed (e.g. during a storm) does not accidentally transmit towards an area occupied by the general public.

Prodelin 3981-226 Antenna (98 cm)

A radiation hazard analysis was done for a Prodelin 98 cm antenna and 2 Watts of power applied at the flange, using the methodology from OET Bulletin 65. The results of this analysis, which can be seen in Attachment 2 hereto, show that the terminals meet the OET Bulletin 65 MPE levels in all regions except for the region between the feed horn and the reflector. This region will not be accessible to the general public because units are either installed on rooftops or elevated positions.

The calculations from OET bulletin 65 estimate that the MPE level may also be exceeded near the reflector surface. This region also would not be accessible to the general public because units are installed on rooftops or elevated positions and positioned in order that clear full time line-of-site access to the spacecraft is ensured. In addition, Galaxy does not believe that it would be possible for a human obstruction, outside the region between the feed horn and the reflector, to cause sufficient blockage to result in significant increased transmit power from the terminal. Also, it is highly improbable that any terminal will transmit sufficient power to exceed the MPE in the near field and transition field area continuously for a 30 minute period, which is the time associated with the MPE of OET Bulletin 65. Therefore, there is no issue associated with human exposure to radiation from this terminal.

Nonetheless, as a further protection mechanism, all VSAT terminals are equipped with an automatic shut-off mechanism which disables the transmitter should the receive signal be lost. This mechanism shuts the transmitter off within milliseconds should the receive carrier be blocked. This mechanism also ensures that a dish which has been accidentally re-pointed (e.g. during a storm) does not accidentally transmit towards an area occupied by the general public

Exhibit C, Attachment 1
 Galaxy Broadband
 Communications, Inc.
 January 2010

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	$\pi \times M \times m / 4$	1.131	meters ²
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	$n(4 \times \pi \times A) / k^2$	20,230	(43.1) dBi
a = Area of Feed Mouth	$\pi \times d^2 / 4$	0.0139	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	$4nP/A$	0.45	< FCC MPE Limit
2 Far Field	$GP / (4(\pi)L^2)$	0.19	< FCC MPE Limit
3 Transition Region	$\leq N_r \text{Fld}$	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	$4P/a$	57.6	> FCC MPE Limit (See Exhibit C)

Exhibit C, Attachment 2

Galaxy Broadband Communications, Inc.

January 2010

RADIATION CALCULATIONS FOR 0.98 meter EARTH STATION			
Nomenclature	Formula	Value	Unit
INPUT PARAMETERS			
M = Antenna Aperture Major Axis		0.98	meters
m = Antenna Aperture Minor Axis		0.98	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	$\pi \times M \times m / 4$.754	meters ²
l = Length of Near Field	$M^2 / 4k$	11	Meters
L = Beginning of Far Field	$0.6M^2 / k$	27	Meters
G = Antenna Gain @ 14.25 GHz	$n(4 \times \pi \times A) / k^2$	13,492	(43.1) dBi
a = Area of Feed Mouth	$\pi \times d^2 / 4$	0.0139	meters ²
POWER DENSITY CALCULATIONS			
Region	Maximum Power Density in Region		
	Formula	Value (mW/cm ²)	Hazard Assessment (FCC MPE Limit = 1 mW/cm ²)
1 Near Field	$4nP/A$	0.67	< FCC MPE Limit
2 Far Field	$GP / (4(\pi)L^2)$	0.29	< FCC MPE Limit
3 Transition Region	$\leq N_r \text{Fld}$	0.67	< FCC MPE Limit
4 Near Reflector Surface	$4P/A$	1.06	> FCC MPE Limit (See Exhibit C)
5 Between Reflector & Ground	P/A	0.27	< FCC MPE Limit
6 Between Reflector and Feed	$4P/a$	57.6	> FCC MPE Limit (See Exhibit C)