EXHIBIT A

INTELSAT LICENSE LLC

1.0 METER KU-BAND EARTH STATION

HAGERSTOWN, MARYLAND

JUNE 27, 2011

Exhibit A

Transmission data for KNS 1.0m antenna

SITE NAME (or identifier):	**Mountainside Teleport**
Antenna location	
LONGITUDE (deg, min, sec- *NAD 83*))	**282 deg, 16 min, 12 sec degrees east**
LATITUDE (deg, min, sec- *NAD 83*))	**39 deg, 42 min, 0 sec degrees north**
ANTENNA HEIGHT IN METERS:	**2.5 meters**
GROUND ELEVATION(AMSL)	**170 m**
ANTENNA LOCATION: GROUND:	**On a vertical post mounted on the ground.**

Antenna Characteristics	
ANTENNA SIZE & GAIN	
SIZE	**1.0 m Ku band antenna**
TX GAIN	**41.1 dBi**
RX GAIN	**40.5 dBi**
ANTENNA MODEL	**SuperTrack Z10Mk2**
ANTENNA MANUFACTURER	**KNS Inc. in Southern Korea**

MAXIMUM HPA POWER	**8 Watts**
TOTAL EIRP FOR ALL CARRIERS	**50.1 dBW**

SATELLITES DESIRED:	**G-25 @ 93 W; H-2 @ 74 W;**

	G-25	**H-2**	
UPLINK FREQUENCIES:	**In range: 14184.5 to 14211.5 MHz**	**In range: 14313.5 to 14318.0 MHz**	
DOWNLINK FREQUENCIES:	**In range: 11884.5 to 11911.5 MHz**	**In range: 12013.5 to 12018.0 MHz**	

Uplink carrier parameters	**G-25**	**H-2**	
TYPE OF SERVICE (broadcast data TTC)	**Data**	**Data**	
DATA RATE(S):	**384 Kb/s**	**384 Kb/s**	
MODULATION:	**BPSK**	**BPSK**	
POLARIZATION	**Horizontal**	**Vertical**	
FORWARD ERROR CODING RATE:	**0.66**	**0.66**	
OCCUPIED BANDWIDTH	**0.758 MHz**	**0.758 MHz**	
UPLINK EIRP PER CARRIER	**45.4 dBW**	**45.4 dBW**	

Downlink Carrier Parameters			
TYPE OF SERVICE (broadcast data TTC)	**Data**	**Data**	
DATA RATE(S):	**512 Kb/s**	**512 Kb/s**	
POLARIZATION:	**Horizontal**	**Vertical**	
MODULATION:	**QPSK**	**QPSK**	
OCCUPIED BANDWIDTH	**0.334 MHz**	**0.334 MHz**	

EXHIBIT B

INTELSAT LICENSE LLC

1.0 METER KU-BAND EARTH STATION

HAGERSTOWN, MARYLAND

JUNE 27, 2011

Analysis of Non-Ionizing Radiation for a 1.0-Meter Earth Station System

This report analyzes the non-ionizing radiation levels for a 1.0-meter earth station system. The analysis and calculations performed in this report comply with the methods described in the FCC Office of Engineering and Technology Bulletin, No. 65 first published in 1985 and revised in 1997 in Edition 97-01. The radiation safety limits used in the analysis are in conformance with the FCC R&O 96-326. Bulletin No. 65 and the FCC R&O specifies that there are two separate tiers of exposure limits that are dependant on the situation in which the exposure takes place and/or the status of the individuals who are subject to the exposure. The Maximum Permissible Exposure (MPE) limits for persons in a General Population/Uncontrolled environment are shown in Table 1. The General Population/Uncontrolled MPE is a function of transmit frequency and is for an exposure period of thirty minutes or less. The MPE limits for persons in an Occupational/Controlled environment are shown in Table 2. The Occupational MPE is a function of transmit frequency and is for an exposure period of six minutes or less. The purpose of the analysis described in this report is to determine the power flux density levels of the earth station in the far-field, near-field, transition region, between the subreflector or feed and main reflector surface, at the main reflector surface, and between the antenna edge and the ground and to compare these levels to the specified MPEs.

Table 1. Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm^2)
30-300	0.2
300-1500	Frequency (MHz)*(0.8/1200)
1500-100,000	1.0

Table 2. Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm^2)
30-300	1.0
300-1500	Frequency (MHz)*(4.0/1200)
1500-100,000	5.0

Table 3. Formulas and Parameters Used for Determining Power Flux Densities

Parameter	Symbol	Formula	Value	Units
Antenna Diameter	D	Input	1.0	m
Antenna Surface Area	$A_{surface}$	$\pi D^2 / 4$	0.79	m^2
Feed Flange Diameter	D_{fa}	Input	19.0	cm
Area of Feed Flange	A_{fa}	$\pi D_{fa}{}^2/4$	283.53	cm^2
Frequency	F	Input	14250	MHz
Wavelength	λ	300 / F	0.021053	m
Transmit Power	P	Input	8.00	W
Antenna Gain (dBi)	G_{es}	Input	41.1	dBi
Antenna Gain (factor)	G	$10^{Ges/10}$	12882.5	n/a
Pi	π	Constant	3.1415927	n/a
Antenna Efficiency	η	$G\lambda^2/(\pi^2 D^2)$	0.58	n/a

1. Far Field Distance Calculation

The distance to the beginning of the far field can be determined from the following equation:

Distance to the Far Field Region $R_{ff} = 0.60\ D^2 / \lambda$ (1)
$= 28.5$ m

The maximum main beam power density in the far field can be determined from the following equation:

On-Axis Power Density in the Far Field $S_{ff} = G\ P / (4\ \pi\ R_{ff}^{\ 2})$ (2)
$= 10.097$ W/m^2
$= 1.010$ mW/cm^2

2. Near Field Calculation

Power flux density is considered to be at a maximum value throughout the entire length of the defined Near Field region. The region is contained within a cylindrical volume having the same diameter as the antenna. Past the boundary of the Near Field region, the power density from the antenna decreases linearly with respect to increasing distance.

The distance to the end of the Near Field can be determined from the following equation:

Extent of the Near Field $R_{nf} = D^2 / (4\ \lambda)$ (3)
$= 11.9$ m

The maximum power density in the Near Field can be determined from the following equation:

Near Field Power Density $S_{nf} = 16.0\ \eta\ P / (\pi\ D^2)$ (4)
$= 23.571$ W/m^2
$= 2.357$ mW/cm^2

3. Transition Region Calculation

The Transition region is located between the Near and Far Field regions. The power density begins to decrease linearly with increasing distance in the Transition region. While the power density decreases inversely with distance in the Transition region, the power density decreases inversely with the square of the distance in the Far Field region. The maximum power density in the Transition region will not exceed that calculated for the Near Field region. The power density calculated in Section 1 is the highest power density the antenna can produce in any of the regions away from the antenna. The power density at a distance R_t can be determined from the following equation:

Transition Region Power Density $S_t = S_{nf}\ R_{nf} / R_t$ (5)
$= 2.357$ mW/cm^2

4. Region between the Feed Assembly and the Antenna Reflector

Transmissions from the feed assembly are directed toward the antenna reflector surface, and are confined within a conical shape defined by the type of feed assembly. The most common feed assemblies are waveguide flanges, horns or subreflectors. The energy between the feed assembly and reflector surface can be calculated by determining the power density at the feed assembly surface. This can be determined from the following equation:

Power Density at the Feed Flange $S_{fa} = 4000\ P / A_{fa}$ (6)

$= 112.863\ mW/cm^2$

5. Main Reflector Region

The power density in the main reflector is determined in the same manner as the power density at the feed assembly. The area is now the area of the reflector aperture and can be determined from the following equation:

Power Density at the Reflector Surface $S_{surface} = 4\ P / A_{surface}$ (7)

$= 40.744\ W/m^2$

$= 4.074\ mW/cm^2$

6. Region between the Reflector and the Ground

Assuming uniform illumination of the reflector surface, the power density between the antenna and the ground can be determined from the following equation:

Power Density between Reflector and Ground $S_g = P / A_{surface}$ (8)

$= 10.186\ W/m^2$

$= 1.019\ mW/cm^2$

7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm^2)		Hazard Assessment
1. Far Field (R_{ff} = 28.5 m)	S_{ff}	1.010	Potential Hazard
2. Near Field (R_{nf} = 11.9 m)	S_{nf}	2.357	Potential Hazard
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	2.357	Potential Hazard
4. Between Feed Assembly and Antenna Reflector	S_{fa}	112.863	Potential Hazard
5. Main Reflector	$S_{surface}$	4.074	Potential Hazard
6. Between Reflector and Ground	S_g	1.019	Potential Hazard

Table 5. Summary of Expected Radiation levels for Controlled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm^2)		Hazard Assessment
1. Far Field (R_{ff} = 28.5 m)	S_{ff}	1.010	Satisfies FCC MPE
2. Near Field (R_{nf} = 11.9 m)	S_{nf}	2.357	Satisfies FCC MPE
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	2.357	Satisfies FCC MPE
4. Between Feed Assembly and Antenna Reflector	S_{fa}	112.863	Potential Hazard
5. Main Reflector	$S_{surface}$	4.074	Satisfies FCC MPE
6. Between Reflector and Ground	S_g	1.019	Satisfies FCC MPE

It is the applicant's responsibility to ensure that the public and operational personnel are not exposed to harmful levels of radiation.

8. Conclusions

Based upon the above analysis, it is concluded that harmful levels of radiation may exist in those regions noted for the Uncontrolled (Table 4) Environment.

The antenna will be installed at Intelsat, LLC's teleport facility in Hagerstown, Maryland. The teleport is a gated and fenced facility with secured access in and around the proposed antenna. The earth station will be marked with the standard radiation hazard warnings, as well as the area in the vicinity of the earth station to inform those in the general population, who might be working or otherwise present in or near the direct path of the main beam.

The applicant will ensure that the main beam of the antenna will be pointed at least one diameter away from any building, or other obstacles in those areas that exceed the MPE levels. Since one diameter removed from the center of the main beam the levels are down at least 20 dB, or by a factor of 100, these potential hazards do not exist for either the public, or for earth station personnel.

Finally, the earth station's operating personnel will not have access to areas that exceed the MPE levels, while the earth station is in operation. The transmitter will be turned off during periods of maintenance, so that the MPE standard of 5.0 mw/cm**2 will be complied with for those regions in close proximity to the main reflector, which could be occupied by operating personnel.

The applicant agrees to abide by the conditions specified in Condition 5208 provided below:

> *Condition 5208 - The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for worker.*

EXHIBIT C

INTELSAT LICENSE LLC

1.0 METER KU-BAND EARTH STATION

HAGERSTOWN, MARYLAND

JUNE 27, 2011

KNS
1314 Gwangpyeong-Dong, Yuseong-gu, DaeJeon South Korea
Tel: +82-42-932-0351 Fax:82-10-9786-8615

Declaration of KNS Inc.

1. KNS Inc. designs, manufactures, and resells/distributes stabilized VSAT terminals, which are then used by our customers for their VSAT/ESV networks.

2. KNS Inc. hereby declares the antenna listed below will meet *§ 25.218* with the specified operating condition with demonstration of *(f)(1),(2)*.

Model	Operating Condition
1.0Meter Ku-band, Model SuperTrack Z10Mk2	N=1 Max. input power spectral density = -18.4dBW/4KHz

3. KNS Inc. hereby declares a pointing error will be less than or equal to 0.2degree between the orbital location of the target satellite and the axis of the main lobe of the antenna.

Company : KNS Inc.

Title : Chief Executive Officer

Name : Byungwook Jin.

Date : 27-June-2011

Signature : Kevin Jin CEO