

**EXHIBIT A**

**INTELSAT LICENSE LLC**

**30-DAY STA REQUEST**

**TO TEST 2.4 METER**

**EARTH STATION**

**AT**

**NAPA, CA**

**JULY 25, 2011**

**EXHIBIT A**  
**Characteristics of the proposed operations**

<b>Antenna location</b> LONGITUDE (deg, min, sec- NAD 83 ) LATITUDE (deg, min, sec- NAD 83 ) ANTENNA HEIGHT IN METERS: GROUND ELEVATION( AMSL) ANTENNA LOCATION:           GROUND: ROOF (Meters) BUILDING HEIGHT (Meters)	<b>Intelsat Napa Teleport</b> 237° 43' 12" East 38° 14' 42" North 3 10 ft GROUND
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<b>Antenna Characteristics</b> ANTENNA SIZE & GAIN SIZE TX GAIN RX GAIN ANTENNA MODEL ANTENNA MANUFACTURER	2.4m 41.7 dBi 38.5 dBi 9797 SEATEL
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MAXIMUM HPA POWER	25 W
TOTAL EIRP FOR ALL CARRIERS	55.7 dBW

SATELLITES DESIRED:	IS-701 @180°E
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UPLINK FREQUENCIES:	6342 – 6378 MHz
DOWNLINK FREQUENCIES:	4117 – 4153 MHz

<b>Uplink carrier parameters</b>			
TYPE OF SERVICE (broadcast data TTC)	Data		
DATA RATE(S):	166 kbps		
MODULATION:	QPSK		
POLARIZATION	RIGHT HAND CIRCULAR		
FORWARD ERROR CODING RATE:	0.660		
OCCUPIED BANDWIDTH	0.163 MHz		
UPLINK EIRP PER CARRIER	45.4		

<b>Downlink Carrier Parameters</b>			
TYPE OF SERVICE (broadcast data TTC)	Data		
DATA RATE(S):	265 kbps		
POLARIZATION:	LEFT HAND CIRCULAR		
MODULATION:	QPSK		
OCCUPIED BANDWIDTH	0.218 MHz		

**EXHIBIT B**

**INTELSAT LICENSE LLC**

**30-DAY STA REQUEST**

**TO TEST 2.4 METER**

**EARTH STATION**

**AT**

**NAPA, CA**

**JULY 25, 2011**

## Analysis of Non-Ionizing Radiation for a 2.4-Meter Earth Station System

This report analyzes the non-ionizing radiation levels for a 2.4-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 <sup>2</sup> )
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 <sup>2</sup> )
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	2.4	m
Antenna Surface Area	A <sub>surface</sub>	$\pi D^2 / 4$	4.52	m <sup>2</sup>
Feed Flange Diameter	D <sub>fa</sub>	Input	19.0	cm
Area of Feed Flange	A <sub>fa</sub>	$\pi D_{fa}^2 / 4$	283.53	cm <sup>2</sup>
Frequency	F	Input	6350	MHz
Wavelength	$\lambda$	300 / F	0.047244	m
Transmit Power	P	Input	25.00	W
Antenna Gain (dBi)	G <sub>es</sub>	Input	41.7	dBi
Antenna Gain (factor)	G	10 <sup>Ges/10</sup>	14791.1	n/a
Pi	$\pi$	Constant	3.1415927	n/a
Antenna Efficiency	$\eta$	$G\lambda^2 / (\pi^2 D^2)$	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:

$$\begin{aligned} \text{Distance to the Far Field Region} \quad R_{ff} &= 0.60 D^2 / \lambda \\ &= 73.2 \text{ m} \end{aligned} \quad (1)$$

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

$$\begin{aligned} \text{On-Axis Power Density in the Far Field} \quad S_{ff} &= G P / (4 \pi R_{ff}^2) \\ &= 5.499 \text{ W/m}^2 \\ &= 0.550 \text{ mW/cm}^2 \end{aligned} \quad (2)$$

## 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:

$$\begin{aligned} \text{Extent of the Near Field} \quad R_{nf} &= D^2 / (4 \lambda) \\ &= 30.5 \text{ m} \end{aligned} \quad (3)$$

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

$$\begin{aligned} \text{Near Field Power Density} \quad S_{nf} &= 16.0 \eta P / (\pi D^2) \\ &= 12.837 \text{ W/m}^2 \\ &= 1.284 \text{ mW/cm}^2 \end{aligned} \quad (4)$$

## 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:

$$\begin{aligned} \text{Transition Region Power Density} \quad S_t &= S_{nf} R_{nf} / R_t \\ &= 1.284 \text{ mW/cm}^2 \end{aligned} \quad (5)$$

#### 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:

$$\begin{aligned} \text{Power Density at the Feed Flange} \quad S_{fa} &= 4000 P / A_{fa} & (6) \\ &= 352.698 \text{ mW/cm}^2 \end{aligned}$$

#### 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:

$$\begin{aligned} \text{Power Density at the Reflector Surface} \quad S_{\text{surface}} &= 4 P / A_{\text{surface}} & (7) \\ &= 22.105 \text{ W/m}^2 \\ &= 2.210 \text{ mW/cm}^2 \end{aligned}$$

#### 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:

$$\begin{aligned} \text{Power Density between Reflector and Ground} \quad S_g &= P / A_{\text{surface}} & (8) \\ &= 5.526 \text{ W/m}^2 \\ &= 0.553 \text{ mW/cm}^2 \end{aligned}$$

## 7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

<b>Region</b>	<b>Calculated Maximum Radiation Power Density Level (mW/cm<sup>2</sup>)</b>		<b>Hazard Assessment</b>
1. Far Field ( $R_{ff} = 73.2$ m)	$S_{ff}$	0.550	Satisfies FCC MPE
2. Near Field ( $R_{nf} = 30.5$ m)	$S_{nf}$	1.284	Potential Hazard
3. Transition Region ( $R_{nf} < R_t < R_{ff}$ )	$S_t$	1.284	Potential Hazard
4. Between Feed Assembly and Antenna Reflector	$S_{fa}$	352.698	Potential Hazard
5. Main Reflector	$S_{surface}$	2.210	Potential Hazard
6. Between Reflector and Ground	$S_g$	0.553	Satisfies FCC MPE

Table 5. Summary of Expected Radiation levels for Controlled Environment

<b>Region</b>	<b>Calculated Maximum Radiation Power Density Level (mW/cm<sup>2</sup>)</b>		<b>Hazard Assessment</b>
1. Far Field ( $R_{ff} = 73.2$ m)	$S_{ff}$	0.550	Satisfies FCC MPE
2. Near Field ( $R_{nf} = 30.5$ m)	$S_{nf}$	1.284	Satisfies FCC MPE
3. Transition Region ( $R_{nf} < R_t < R_{ff}$ )	$S_t$	1.284	Satisfies FCC MPE
4. Between Feed Assembly and Antenna Reflector	$S_{fa}$	352.698	Potential Hazard
5. Main Reflector	$S_{surface}$	2.210	Satisfies FCC MPE
6. Between Reflector and Ground	$S_g$	0.553	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 FCC RF Guidelines have been exceeded in the specified region(s) of Table 4. The applicant proposes to comply with the Maximum Permissible Exposure (MPE) limits of 1.0 mW/cm<sup>2</sup> for the Uncontrolled Areas, and the MPE limits of 5.0 mW/cm<sup>2</sup> for the Controlled Areas.

The antenna will be installed at the Applicant's teleport facility near Napa, California. The earth station facility is surrounded by a fence, which will restrict any public access. 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<sup>2</sup> 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](http://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**

**30-DAY STA REQUEST**

**TO TEST 2.4 METER**

**EARTH STATION**

**AT**

**NAPA, CA**

**JULY 25, 2011**

Prepared By

**COMSEARCH**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Prepared For

**Intelsat License LLC  
NAPA, CALIFORNIA**

Temporary Transmit/Receive Earth Station  
Operation Dates: 07/08/2011 - 10/08/2011

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations. Verbal and written coordination was conducted with the below listed carriers on June 25, 2011.

Company

AT&T California  
AT&T Mobility Wireless Operations Hldgs  
Alameda County of California  
CBS Broadcasting Inc  
CONTRA COSTA COUNTY COMMUNICATIONS DEPT.  
CRYSTAL SMR INC.  
California, State of  
City & County of San Francisco PUC  
County of San Mateo  
EAST BAY MUNICIPAL UTILITY DISTRICT  
Edge Wireless - LLC- Northern California  
Federal Communications Commission  
GTE Mobilnet of California LTD Partnersh  
ICG Telecom Group, Inc. - Debtor in poss  
KQED INC  
M.U.T. Licensing, LLC  
MCI Communications Services Inc.  
METROPOLITAN AREA NETWORKS, INC.  
MODESTO IRRIGATION DISTRICT  
Marin County of California  
Napa, County of  
New Cingular Wireless PCS LLC - N CAL  
Open Range Communications  
Pacific Gas and Electric Company  
ROMAN CATHOLIC COMMUNICATIONS CORP  
SAN FRANCISCO CITY & COUNTY CALIFORNIA  
SAN JOSE CITY OF (ECOMM)  
Sacramento County  
Sacramento Municipal Utility District  
Sacramento Valley Limited Partnership

Company (Continued)

San Joaquin County  
Santa Clara, County of  
Solano County Communications Division  
Sonoma County, California  
Union Pacific Railroad Company  
Western Technical Services  
Yolo Emergency Communications Agency  
Yolo, County of

There are no unresolved interference objections with the stations contained in these applications.

The following section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Date: 07/09/2011  
Job Number: 110625COMSJC01

### Administrative Information

Status: TEMPORARY (Operation from 07/08/2011 to 10/08/2011)  
Call Sign: TEMP10  
Licensee Code: INTELS  
Licensee Name: Intelsat License LLC

### Site Information

#### NAPA, CALIFORNIA

Venue Name  
Latitude (NAD 83): 38° 14' 42.0" N  
Longitude (NAD 83): 122° 16' 48.0" W  
Climate Zone: B  
Rain Zone: 3  
Ground Elevation (AMSL): 3.05 m / 10.0 ft

### Link Information

Satellite Type: Geostationary  
Mode: TR - Transmit-Receive  
Modulation: Digital  
Satellite Arc: 179° W to 181° West Longitude  
Azimuth Range: 247.9° to 249.4°  
Corresponding Elevation Angles: 17.2° / 15.7°  
Antenna Centerline (AGL): 2.44 m / 8.0 ft

### Antenna Information

#### Receive

#### Transmit

Manufacturer	SeaTel	SeaTel	
Model	9797	9797	
Gain / Diameter	38.5 dBi / 2.4 m	41.7 dBi / 2.4 m	
3-dB / 15-dB Beamwidth	2.04° / 3.80°	1.41° / 2.65°	
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)	-12.4 3.7	
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)	29.3 45.4	
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%	-154.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz 0.01%	-131.0 dBW/4 kHz 0.0025%

### Frequency Information

#### Receive 4.0 GHz

#### Transmit 6.1 GHz

Emission / Frequency Range (MHz)	218KG7W / 4117.0 - 4153.0	163KG7W / 6342.0 - 6378.0
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	152.4 km / 94.7 mi
Precipitation Scatter Contour Radius	375.7 km / 233.4 mi	100.0 km / 62.1 mi

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

### Coordination Values

### NAPA, CA

Licensee Name	Intelsat License LLC		
Latitude (NAD 83)	38° 14' 42.0" N		
Longitude (NAD 83)	122° 16' 48.0" W		
Ground Elevation (AMSL)	3.05 m / 10.0 ft		
Antenna Centerline (AGL)	2.44 m / 8.0 ft		
Antenna Model	SeaTel 9797		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
Max Available RF Power			-12.4 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	109.81	-10.00	412.20	-10.00	152.41
5	0.00	114.59	-10.00	412.20	-10.00	152.41
10	0.93	119.50	-10.00	261.19	-10.00	100.78
15	0.70	124.23	-10.00	291.84	-10.00	111.78
20	0.51	128.92	-10.00	319.87	-10.00	118.95
25	0.59	133.62	-10.00	308.37	-10.00	117.15
30	1.45	138.51	-10.00	227.96	-10.00	100.00
35	2.53	143.47	-10.00	180.08	-10.00	100.00
40	2.04	147.85	-10.00	198.06	-10.00	100.00
45	3.03	152.70	-10.00	163.89	-10.00	100.00
50	2.93	156.92	-10.00	166.79	-10.00	100.00
55	3.67	161.33	-10.00	147.88	-10.00	100.00
60	3.87	164.53	-10.00	143.29	-10.00	100.00
65	4.78	167.23	-10.00	133.38	-10.00	100.00
70	4.78	167.38	-10.00	133.34	-10.00	100.00
75	4.39	165.36	-10.00	136.77	-10.00	100.00
80	4.27	162.34	-10.00	137.84	-10.00	100.00
85	4.16	158.59	-10.00	138.91	-10.00	100.00
90	3.94	154.38	-10.00	141.62	-10.00	100.00
95	3.53	149.86	-10.00	150.94	-10.00	100.00
100	3.53	145.38	-10.00	150.94	-10.00	100.00
105	4.54	141.07	-10.00	135.47	-10.00	100.00
110	4.60	136.38	-10.00	134.91	-10.00	100.00
115	5.26	131.74	-10.00	128.61	-10.00	100.00
120	5.96	127.03	-10.00	121.47	-10.00	100.00
125	6.51	122.24	-10.00	119.85	-10.00	100.00
130	6.51	117.36	-10.00	119.85	-10.00	100.00
135	7.43	112.53	-10.00	117.74	-10.00	100.00
140	7.43	107.62	-10.00	117.74	-10.00	100.00
145	7.15	102.68	-10.00	118.37	-10.00	100.00
150	7.09	97.76	-10.00	118.51	-10.00	100.00
155	7.39	92.84	-10.00	117.82	-10.00	100.00
160	8.06	87.91	-10.00	118.06	-10.00	100.00
165	8.07	82.98	-10.00	118.06	-10.00	100.00
170	8.07	78.04	-10.00	118.06	-10.00	100.00
175	8.42	73.09	-10.00	117.26	-10.00	100.00
180	8.42	68.16	-10.00	117.26	-10.00	100.00

# COMSEARCH

## Earth Station Data Sheet

19700 Janella Farm Boulevard, Ashburn, VA 20147  
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### Coordination Values


### NAPA, CA

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Antenna Centerline (AGL)	2.44 m / 8.0 ft		
Antenna Model	SeaTel 9797		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz 20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power			-12.4 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
185	8.26	63.24	-10.00	117.62	-10.00	100.00
190	7.75	58.37	-10.00	118.77	-10.00	100.00
195	7.75	53.47	-10.00	118.77	-10.00	100.00
200	7.75	48.59	-10.00	118.77	-10.00	100.00
205	7.07	43.84	-9.05	121.51	-9.05	100.00
210	5.71	39.34	-7.87	131.39	-7.87	100.00
215	5.26	34.76	-6.53	141.91	-6.53	100.00
220	5.26	30.15	-4.98	148.53	-4.98	100.00
225	4.78	25.89	-3.33	162.12	-3.33	100.00
230	3.89	22.17	-1.65	183.61	-1.65	100.00
235	3.89	18.46	0.35	195.13	0.35	100.00
240	3.45	15.39	2.32	222.76	2.32	100.00
245	2.64	13.76	3.53	263.79	3.53	100.00
250	2.64	13.07	4.09	268.18	4.09	100.00
255	2.64	14.19	3.20	261.25	3.20	100.00
260	2.03	17.24	1.09	274.84	1.09	102.42
265	2.03	20.63	-0.86	261.13	-0.86	100.00
270	2.03	24.56	-2.76	246.88	-2.76	100.00
275	1.38	29.10	-4.60	270.02	-4.60	102.33
280	1.38	33.50	-6.12	259.64	-6.12	100.00
285	0.77	38.23	-7.56	302.17	-7.56	114.39
290	0.92	42.78	-8.78	272.14	-8.78	104.49
295	1.07	47.40	-9.90	250.51	-9.90	100.00
300	0.90	52.15	-10.00	264.18	-10.00	101.93
305	1.31	56.83	-10.00	236.00	-10.00	100.00
310	0.90	61.68	-10.00	264.44	-10.00	102.03
315	1.05	66.45	-10.00	250.99	-10.00	100.00
320	1.17	71.26	-10.00	243.56	-10.00	100.00
325	1.29	76.07	-10.00	236.77	-10.00	100.00
330	0.90	80.93	-10.00	264.37	-10.00	102.00
335	0.00	85.78	-10.00	412.20	-10.00	152.41
340	0.00	90.59	-10.00	412.20	-10.00	152.41
345	0.00	95.40	-10.00	412.20	-10.00	152.41
350	0.00	100.21	-10.00	412.20	-10.00	152.41
355	0.00	105.02	-10.00	412.20	-10.00	152.41

## Certification

I hereby certify that I am the technically qualified person responsible for the preparation of the frequency coordination data contained in this report. I am familiar with Parts 101 and 25 of the FCC Rules and Regulations and I have either prepared or reviewed the frequency coordination data submitted with this report, and that it is complete and correct to the best of my knowledge and belief.



Jeffrey E. Cowles  
Principal Frequency Planner  
COMSEARCH  
19700 Janelia Farm Blvd.  
Ashburn, Va. 20147

DATED: July 9, 2011

**EXHIBIT D**

**INTELSAT LICENSE LLC**

**30-DAY STA REQUEST**

**TO TEST 2.4 METER**

**EARTH STATION**

**AT**

**NAPA, CA**

**JULY 25, 2011**



**COBHAM**

Cobham SATCOM  
 Marine Systems  
 Sea Tel Products  
 4030 Nelson Ave., Concord  
 California, 94520, USA  
 T: +1 (925) 798-7979  
 F: +1 (925) 798-7986

Declaration of Cobham SATCOM, Sea Tel, Inc.

1. Cobham SATCOM - Marine Systems, Sea Tel Products designs, develops, manufactures and services marine stabilized antenna systems for satellite communication at sea. These products are in turn used by our customers as part of their C-band Earth Station on Vessels (ESV) networks.
2. FCC regulation 47 C.F.R. § 25.221 defines the provisions for blanket licensing of ESV antennas operating in the C Band. This declaration covers the requirements for meeting § 25.221 (a)(1)-(a)(7). The requirements for meeting § 25.221 (a)(8)-(a)(10) are left to the applicant. The paragraph numbers in this declaration refer to the 2005 version of FCC 47 C.F.R. § 25.221.
3. Sea Tel hereby declares that the antennas listed below will meet the off-axis EIRP spectral density requirements of § 25.221 (a)(1)-(4) when the following Input Power spectral density limitations are met:
  - 1.5 Meter C Band, Models 6006 and 6009 are limited to -10 dBW/4kHz
  - 2.4 Meter C Band, Models 9797 and 9707 are limited to -7 dBW/4kHz
4. Sea Tel hereby declares that the antennas referenced in paragraph 3 above, will maintain a stabilization pointing accuracy of better than 0.2 degrees under specified ship motion conditions, thus meeting the requirements of § 25.221 (a)(6).
5. Sea Tel hereby declares that the antennas referenced in paragraph 3 above, will automatically cease transmission within 100 milliseconds if the pointing error should exceed 0.5 degrees and will not resume transmission until the error drops below 0.2 degrees, thus meeting the requirements of § 25.221 (a)(7).
6. Sea Tel maintains all relevant test data, which is available upon request, to verify these declarations.

Executed on: 4/27/10

By: 

Peter G. Blaney  
 Chief Engineer, Sea Tel Products  
 Cobham SATCOM, Marine Systems

Document Number 130449 rev D

**EXHIBIT E**

**INTELSAT LICENSE LLC**

**30-DAY STA REQUEST**

**TO TEST 2.4 METER**

**EARTH STATION**

**AT**

**NAPA, CA**

**JULY 25, 2011**

## **EXHIBIT E**

### **COMMENTS REGARDING COMPLIANCE WITH SECTION 25.218 OFF-AXIS EIRP DENSITY LEVELS**

The proposed operations will comply with the relevant off-axis EIRP density levels of Section 25.218 of the FCC's rules.

Exhibit D is a statement from the antenna manufacturer stipulating compliance with various FCC provisions, including the off-axis EIRP density levels in Section 25.221(a)(1) and 25.221(a)(2) of the FCC's rules. Section 25.221 would be applicable for operation of this antenna on a vessel (as an ESV). According to the manufacturer's statement, this compliance is ensured for a transmitted power density level of at most -7dBW/4 kHz. The power density level of -12.4 dBW/4 kHz, which is transmitted during the proposed operations, is lower than the above value and thus compliance with Section 25.221 off-axis EIRP density levels is ensured.

The above section 25.221 off-axis EIRP density levels are more restrictive than those specified in Section 25.218(d)(1) and 25.218(d)(2) of the FCC's rules. As Section 25.218 is applicable in this case of a fixed transmit/receive operation, the transmissions will be within the levels permitted under Section 25.218 of the FCC's rules, and will be consistent with the FCC's two-degree spacing policy.