<u>Exhibit A</u> Lockheed Martin Corporation Carpentersville, NJ Earth Station Call Sign E7541 STA Request for LEOp TT&C Operations March 2013

#### **Description**

Lockheed Martin Corporation ("Lockheed Martin") requests special temporary authority ("STA") to operate its Carpentersville, New Jersey C-band fixed earth station (see File No. SES-LIC-20081103-01443, as amended)<sup>1</sup> to provide telemetry, tracking and control ("TT&C") functions during the post-launch and transfer orbit phases of operation for the Satmex 8 satellite that will be operated by Satélites Mexicanos, S.A. de C.V. ("Satmex"). Satmex 8 is currently scheduled for launch on March 27, 2013 (March 26, DC time), and Lockheed Martin intends to perform test transmissions in preparation for the launch on or about March 24, 2013.<sup>2</sup> To the extent required to meet this timetable, Lockheed Martin requests expedited treatment of the instant STA request and action by March 24, 2013.

Lockheed Martin specifically seeks authority to transmit using left-hand circular polarization on the 5926.5 MHz frequency, and using left-hand circular polarization on the 6426.5 MHz frequency. The earth station would receive telemetry signals from the Satmex 8 satellite on the 4199.4 and 4198.6 MHz channels (both right-hand circular polarization). The mission duration for the TT&C operations requested here is no more than 10 days after launch. Lockheed Martin hereby requests a 30-day STA term commencing March 24, 2013 to enable it to accommodate any slippage in the launch date without the need for additional authority from the Commission.

The transmit frequencies Lockheed Martin seeks to use for the AsiaSat-7 TT&C support operations are not included in Lockheed Martin's former license for Call Sign E7541 and current application for the C-band antenna in File No. SES-LIC-20081103-01443 (also under Call Sign E7541). Lockheed Martin notes, however, that the Commission has previously granted Lockheed Martin STA requests for launch and early-operations TT&C support using its Carpentersville, New Jersey earth station facilities. Most recently, the Commission authorized Lockheed Martin to perform launch support operations for the Vinasat-2 satellite in May 2012. *See e.g.*, Request of Lockheed Martin Corp. for STA to support LEOp TT&C Functions of JCSAT-13 and Vinasat-2, File No. SES-STA-20120427-00403. *See also*, Request of Lockheed

<sup>&</sup>lt;sup>1</sup> The pending application in File No. SES-LIC-20081103-01443, under Call Sign E7541, was filed on a provisional basis to replace Lockheed Martin's inadvertently non-renewed license for a 14.2 meter C-band antenna at the Carpentersville, NJ site, also under Call Sign E7541. Lockheed Martin's petition to reinstate the license for Call Sign E7541, as well as the "replacement" application it filed in the alternative under File No. SES-LIC-20081103-01443, are pending.

 $<sup>^{2}</sup>$  The test transmissions that would begin on or about March 24, 2013 would occur over a period of approximately two days. During these tests, the earth station would not be communicating with any satellite; instead, the transmissions will be made with the antenna at zenith to verify RF functionality.

Martin Corp. for STA to support LEOp TT&C Functions of AsiaSat-7, File No. SES-STA-20111108-01341; Request of Lockheed Martin to support LEOp TT&C Functions of QuetzSat-1, File No. SES-STA-20110919-01105. Lockheed Martin's pending license application in File No. SES-LIC-20081103-01443 included a radiation hazard study for this frequency range that Lockheed Martin hereby incorporates by reference. *See* Exhibit 28 to Application of Lockheed Martin Corporation, File No. SES-LIC-20081103-01443.

Lockheed Martin's proposed transmissions on the 5926.5 MHz and 6426.5 MHz transmit frequencies will use the emission designators for telecommand functions that are proposed in the pending license application, or will use carriers that do not exceed the highest e.i.r.p., e.i.r.p. density, and bandwidth prescribed in the application for the telecommand carriers. When no commands are being sent, a CW carrier that is within the emission envelope proposed in Lockheed Martin's application, as amended, would be present. See File No. SES-AMD-20081219-01664, at Schedule B. The information in the Schedule B portion of Lockheed Martin's pending application in File No. SES-LIC-20081130-01443, as amended, is hereby incorporated by reference. Lockheed Martin notes that it is possible that during an unexpected emergency with the satellite, the power levels proposed for the earth station in the 2008 application as amended may need to be exceeded to help recover the satellite. Under these extremely unlikely circumstances, Lockheed Martin will make every effort to coordinate such operations with affected users, and will take all reasonable steps to swiftly eliminate any harmful interference caused. Lockheed Martin fully understands that all of its proposed launch and earlyoperations TT&C support for the Satmex 8 launch will be on a strictly non-harmful interference, non-protected basis.

Lockheed Martin has requested from Comsearch a temporary frequency coordination that covers the entire proposed STA window (March 24, 2013 through July 4, 2013) for operations on the Satmex 8 TT&C frequencies from its Carpentersville earth station facility. The Prior Coordination Notice for this coordination is attached to this Exhibit A. Lockheed Martin expects the final report imminently, and will forward that to the Commission to supplement this STA request as soon as the report is delivered.

Lockheed Martin believes that the limited operations it proposed in support of the launch of Satmex 8 – operations Lockheed Martin and the satellite operator will coordinate in advance with any and all potentially affected entities that operate communications systems in compliance with the Table of Frequency Allocations during the limited period of use – are required in the public interest. Lockheed Martin's earth station will be part of a global network of control facilities that will be used to position the satellite as it progresses from transfer orbit to its final location. The safe and orderly use of the entire geostationary orbital resource and protection of the hundreds of satellites from the U.S. and other countries that operate there depends in no small part on ensuring that the Satmex 8 satellite is controlled while over North America, and Lockheed Martin's earth station thus will serve a limited-duration, but nonetheless vital function.

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to, or reception from, Satmex 8 is to occur through the subject earth station. Mr. Usarzewicz can be reached at the following cell phone number: (609)-865-2658 and/or station number: (908) 859-4050.

The antenna to be used for operations under the proposed STA is already built. It is the same antenna that was previously authorized under Call Sign E7541 and that is now the subject of the pending application and reinstatement request described in Note 1 above.

In sum, Lockheed Martin requests authority to operate its Carpentersville, NJ C-band earth station antenna to provide critical TT&C services during the launch and early operations phase of the Satmex 8 satellite, for a term of 30 days – including two days for calibration testing, and a 10 day window between March 24, 2013 and April 23, 2013 for TT&C support operations.

EXHIBIT A

19700 Janelia Farm Boulevard

Ashburn, VA 20147 (703) 726-5500



Fax (703) 726-5600 CO

March 13, 2013

\*\*\* CLIENT COPY \*\*\*

\*\*\* PLEASE MAIL \*\*\* \*\*\* TO CUSTOMER \*\*\*

Re: LOCKHEED MARTIN CORPORATION Carpentersville, New Jersey Temporary Transmit-Only Earth Station Operation Dates: 03/24/2013 - 07/04/2013 Job Number: 130313COMSJC01

Dear Frequency Coordinator:

On behalf of Lockheed Martin Corporation, we are forwarding the attached coordination data for temporary operations from the transmit-only earth station located at the site referenced above.

This earth station will transmit only on the satellite(s) and frequency or frequencies as described in the attached data. Please do not report cases involving 4 GHz facilities or problems involving non-active paths or frequencies outside the specified range.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Jeffrey E. Cowles Engineer III, Telecommunications jcowles@comsearch.com

Enclosure(s)

### COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147 (703)726-5660 http://www.comsearch.com

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Date: Job Number:	03/13/2013 130313COMSJC01
Administrative Information Status Call Sign Licensee Code Licensee Name	TEMPORARY (Operation from 03/24/2013 to 07/04/2013) TEMP07 RCASTR LOCKHEED MARTIN CORPORATION
Site Information Venue Name Latitude (NAD 83) Longitude (NAD 83) Climate Zone Rain Zone Ground Elevation (AMSL)	CARPENTERSVILLE, NEW JERSEY 40° 38' 39.4" N 75° 11' 27.6" W A 2 54.86 m / 180.0 ft
Link Information Satellite Type Mode Modulation Satellite Arc Azimuth Range Corresponding Elevation Angles Antenna Centerline (AGL)	Geostationary TO - Transmit-Only Digital 18° W to 136° West Longitude 112.8° to 250.0° 15.9° / 13.3° 9.14 m / 30.0 ft
Antenna Information Manufacturer Model Gain / Diameter 3-dB / 15-dB Beamwidth	<b>Transmit</b> TIW 14.2 Meter 57.5 dBi / 14.2 m 0.20° / 0.50°
Max Available RF Power (dBW/4 k (dBW/MH	
Maximum EIRP (dBW/4 k (dBW/MF (dBW)	
Interference Objectives: Long Term Short Term	
Frequency Information Emission / Frequency Range (MHz)	<b>Transmit 6.1 GHz</b> 1K00G3D / 5926.5 1K00G3D / 6424.5
Max Great Circle Coordination Distance Precipitation Scatter Contour Radius	332.5 km / 206.6 mi 0.0 km / 0.0 mi

## COMSEARCH

#### Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147 (703)726-5660 http://www.comsearch.com

Coordination Values	CARPENTERSVILLE, NJ			
Licensee Name	LOCKHEED MARTIN CORPORATION			
Latitude (NAD 83)	40° 38' 39.4" N			
Longitude (NAD 83)	75° 11' 27.6" W			
Ground Elevation (AMSL)	54.86 m / 180.0 ft			
Antenna Centerline (AGL)	9.14 m / 30.0 ft			
Antenna Model	TIW 14.2 Meter			
Antenna Mode	Transmit 6.1 GHz			
Interference Objectives: Long Ter	m -154.0 dBW/4 kHz 20%			
Short Ter	m -131.0 dBW/4 kHz 0.0025%			
Max Available RF Power	29.8 (dBW/4 kHz)			

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30   3.56   82.95   -10.00   195.34     35   3.79   78.06   -10.00   190.53     40   3.82   73.17   -10.00   189.87     45   3.86   68.30   -10.00   189.14						
35   3.79   78.06   -10.00   190.53     40   3.82   73.17   -10.00   189.87     45   3.86   68.30   -10.00   189.14						
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45 3.86 68.30 -10.00 189.14						
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100 2.73 18.28 0.45 277.67 105 2.74 15.26 2.41 292.71						
110 2.73 13.47 3.77 304.07						
115 2.77 13.33 3.88 303.80						
120 2.69 15.03 2.57 295.48						
125 2.45 18.11 0.55 286.45						
130 2.22 21.59 -1.36 278.19						
135 2.18 24.78 -2.85 268.15						
140 2.74 27.34 -3.92 246.85						
145 2.33 30.44 -5.09 248.88						
150 2.25 33.04 -5.98 245.92						
155 1.92 35.57 -6.78 249.16						
160 2.20 37.24 -7.28 239.18						
165 2.65 38.35 -7.59 226.37						
170 2.42 39.68 -7.96 229.52						
175 1.94 40.84 -8.28 240.16						
180 1.90 41.11 -8.35 240.76	180					
185 1.86 40.92 -8.30 242.51	185					

# COMSEARCH

Earth Station Data Sheet

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Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Ter	m -154.0 dBW/4 kHz 20%
Short Ter	m -131.0 dBW/4 kHz 0.0025%
Max Available RF Power	29.8 (dBW/4 kHz)

	Transmit 6.1 GHz				
	Horizon	Antenna	Horizon	Coordination	
Azimuth (°)	Elevation (°)	Discrimination (°)	Gain (dBi)	Distance (km)	
190	1.24	40.83	-8.27	262.31	
195	1.36	39.56	-7.93	260.37	
200	2.35	37.10	-7.24	235.63	
205	1.76	35.72	-6.82	254.19	
210	1.78	33.43	-6.10	258.04	
215	2,34	30.43	-5.08	248.60	
220	3.42	26.81	-3.71	231.95	
225	4.04	23.36	-2.21	227.67	
230	4.93	19.56	-0.29	224.91	
235	4.35	16.73	1.41	246.63	
240	4.47	13.24	3.95	261.50	
245	3.78	10.70	6.27	294.75	
250	.2.48	10.78	6.19	332.54	
255	2.26	12.06	4.97	328.43	
260	2.60	14.57	2.91	300.92	
265	3.11	18.04	0.59	268.55	
270	3.30	22.25	-1.68	248.05	
275	2.81	26.96	-3.77	245.92	
280	2.85	31.59	-5.49	234.12	
285	3.20	36.24	-6.98	217.28	
290	3.81	40.92	-8.30	199.19	
295	4.44	45.67	-9.49	181.52	
300	5.32	50.46	-10.00	163.45	
305	5.51	55.36	-10.00	161.12	
310	5.49	60.30	-10.00	161.42	
315	5.56	65.24	-10.00	160.57	
320	4.72	70.23	-10.00	173.94	
325	3.93	75.20	-10.00	187.73	
330	3.38	80.15	-10.00	199.12	
335	3.19	85.08	-10.00	203.25	
340	3.15	90.00	-10.00	203.97	
345	3.16	94.92	-10.00	203.80	
350	3.35	99.85	-10.00	199.81	
355	3.48	104.78	-10.00	197.17	