

E7541 SES-STA-20110919-01105 IB2011004327
Lockheed Martin Corporation

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Request for STA re

I. Applicant

| | | | |
|------------|---------------------------------|---------------|--------------------------|
| Name: | Lockheed Martin Corporation | Phone Number: | 703-413-5970 |
| DBA Name: | | Fax Number: | 703-413-5908 |
| Street: | 2121 Crystal Drive Suite 100 | E-Mail: | jennifer.warren@lmco.com |
| City: | Arlington | State: | VA |
| Country: | USA | Zipcode: | 22202 |
| Attention: | Ms Jennifer Warren | | - |



File# SES-STA-20110919-01105
Call Sign E7541 Grant Date 09/24/2011
(or other identifier)
Term Dates
From 09/27/2010 To 09/26/2011
Approved: Paul S. [Signature]

30 days

"with conditions"

Conditions of Grant of SES-STA-20110919-01105
Call Sign E7541

Lockheed Martin Corporation (Lockheed) is granted Special Temporary Authority to provide telemetry, tracking and control ("TT&C") functions during the post-launch and transfer orbit phases of operation for the QuetzSat-1 satellite that will be operated by QuetzSat, a Mexican satellite operator. This authorization is for 30 days, from September 27, 2011 to October, 26, 2011.

The permanent orbital location for QuetzSat-1 will be 77.0° W.L. The satellite will be in-orbit tested at 67.1° W.L.

Operations will be performed in the following frequency bands: 17797 MHz and 17793 MHz telecommand uplink channels (both RHCP) and telemetry signals from the QuetzSat-1 satellite on the 12.6985 GHz, 12.6945 GHz, 12.692 GHz and 12.693 GHz downlink channels (all RHCP).

1. All operations shall be on an unprotected and non-harmful interference basis, i.e., Intelsat shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station.
2. In the event that there is a report of interference, Lockheed must immediately terminate transmissions and notify the FCC in writing.
3. The LEOP operations will be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path. All operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs.
4. Lockheed must make all reasonable and customary measures to ensure that the earth station does not create a potential for harmful non-ionizing radiation to persons who may be in the vicinity of the earth station when it is in operation. At a minimum, permanent warning labels shall be fixed to the earth station and its housing warning of the radiation hazard and including a diagram showing the regions around the earth station where radiation levels could exceed 1.0 mW/cm². The earth station operator shall be responsible for assuring that individuals do not stray into the regions around the earth station where there is a potential for exceeding the maximum permissible exposure limits required by 47 C.F.R. §1.1310. This shall be accomplished by means of signs, caution tape, verbal warnings, placement of the earth station so as to minimize access to the hazardous region, and/or other appropriate means.

30 days *"With Conditions"*



File# SES-STA-20110919-01105
Call Sign E7541 Grant Date 09/26/2011
(or other identifier) Term Dates
From 09/27/2011 To: 10/26/2011
Approved: Paul E. Halc

Exhibit A
Lockheed Martin Corporation
Carpentersville, NJ Earth Station
Call Sign E7541
STA Request for
LEOp TT&C Operations
September 2011

Description

Lockheed Martin Corporation (“Lockheed Martin”) requests special temporary authority (“STA”) to operate its Carpentersville, New Jersey Ku-band fixed earth station (see File No. SES-LIC-20081103-01443, as amended)¹ to provide telemetry, tracking and control (“TT&C”) functions during the post-launch and transfer orbit phases of operation for the QuetzSat-1 satellite that will be operated by QuetzSat, a Mexican satellite operator. QuetzSat-1 is currently scheduled for launch on September 29, 2011, and Lockheed Martin intends to perform test transmissions in preparation for the launch on or about September 27, 2011.² To the extent required to meet this timetable, Lockheed Martin requests expedited treatment of the instant STA request and action by September 26, 2011.

Lockheed Martin specifically seeks authority to transmit on the 17797 MHz and 17793 MHz telecommand uplink channels (both RHCP). The earth station would receive telemetry signals from the QuetzSat-1 satellite on the 12.6985 GHz, 12.6945 GHz, 12.692 GHz and 12.693 GHz channels (all RHCP). 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 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 QuetzSat-1 TT&C support operations are not included in Lockheed Martin’s former license for Call Sign E920702 and current application for the Ku-band antenna in File No. SES-LIC-20081103-01443 (under Call Sign E7541). Lockheed Martin notes, however, that the Commission previously granted Lockheed Martin STA requests for launch and early-operations TT&C support using frequencies in the general frequency ranges sought in the instant STA request. Most recently, the Commission authorized Lockheed Martin to perform launch support operations for the BSAT-3c satellite in July 2011 using a telecommand frequency at one edge of the 17.3-17.8 GHz band and a telemetry frequency at the edge of the 11.7-12.7 GHz range. *See* Request of Lockheed Martin Corp. for STA to support LEOp TT&C Functions of BSAT-3c, File No. SES-STA-20110504-

¹ 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 Ku-band antenna at the Carpentersville, NJ site under Call Sign E920702. Lockheed Martin’s petition to reinstate the license for Call Sign E920702, as well as the “replacement” application it filed in the alternative under File No. SES-LIC-20081103-01443 and Call Sign E7541, are pending.

² The test transmissions that would begin on or about September 27, 2011 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.

00547. *See also*, Request of Lockheed Martin Corp. for STA to Support LEOp TT&C Functions for EchoStar-7, File No. SES-STA-20020208-00160 (STA to support launch and early operations TT&C functions for EchoStar-7 satellite using 17.3-17.8 GHz band frequencies for Earth-to-space telecommand transmissions) (“EchoStar-7 TT&C STA”). The EchoStar-7 TT&C STA request included a radiation hazard study for this frequency range that Lockheed Martin hereby incorporates by reference. *See* EchoStar-7 TT&C STA, at Attachment 3.

Lockheed Martin’s proposed transmissions on the 17797 MHz and 17793 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 early-operations TT&C support for the QuetzSat-1 launch will be on a strictly non-harmful interference, non-protected basis.

Lockheed Martin has secured a temporary frequency coordination that covers the entire proposed STA window (September 27, 2011 through October 26, 2011) for operations on the QuetzSat-1 TT&C frequencies from its Carpentersville earth station facility. The report is attached to this Exhibit A.

Lockheed Martin believes that the limited operations it proposed in support of the launch of QuetzSat-1 – 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 QuetzSat-1 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, QuetzSat-1 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 E920270 and that is now the subject of the pending application and reinstatement request described in Note 1 above, and, as noted, has been authorized for use on an STA-basis to support other satellite launches.

In sum, Lockheed Martin requests authority to operate its Carpentersville, NJ Ku-band earth station antenna to provide critical TT&C services during the launch and early operations phase of the QuetzSat-1 satellite, for a term of 30 days – including two days for calibration testing, and a 10 day window between September 29 and October 26, 2011 for TT&C support operations.

| | |
|--|--|
| 2. Contact | |
| Name: | Stephen D. Baruch |
| Phone Number: | 202-416-6782 |
| Company: | Lerman Senter PLLC |
| Fax Number: | 202-293-7783 |
| Street: | 2000 K Street, NW Suite 600 |
| E-Mail: | sbaruch@lermansenter.com |
| City: | Washington |
| State: | DC |
| Country: | USA |
| Zipcode: | 20006 -1809 |
| Attention: | Relationship: Legal Counsel |
| (If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.) | |
| 3. Reference File Number SESLIC2008110301443 or Submission ID | |
| 4a. Is a fee submitted with this application? | |
| <input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input type="radio"/> Other (please explain): | |
| 4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station | |
| 5. Type Request | |
| <input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other | |
| 6. Requested Use Prior Date | |
| 09/27/2011 | |
| 7. City Carpentersville | 8. Latitude (dd mm ss.s h) 40 38 39.0 N |

| | |
|---|---|
| 9. State NJ | 10. Longitude (dd mm ss.s h) 75 11 29.0 W |
| 11. Please supply any need attachments. Attachment 1: Exhibit A Attachment 2: Attachment 3: | |
| 12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px;"> <p>Lockheed Martin Corp. requests authority to use its Carpentersville, NJ earth station to support post-launch/early-operations TT&C for the QuetzSat-1 satellite. Action requested by September 27, 2011, to support calibration tests, and launch operations during the launch now scheduled for September 29, 2011. See Exhibit A</p> </div> | |
| 13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No | |
| 14. Name of Person Signing Jennifer Warren | 15. Title of Person Signing Vice President, Technology Policy & Regulation |
| <p align="center">WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).</p> | |

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