

SES-STA-20090615-00734  
Lockheed Martin Corporation

IB2009001611

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:  
LM-STA E7541/E920702

1. Applicant

<b>Name:</b>	Lockheed Martin Corporation	<b>Phone Number:</b>	703-413-5970
<b>DBA Name:</b>		<b>Fax Number:</b>	703-413-5908
<b>Street:</b>	1550 Crystal Drive Suite 300	<b>E-Mail:</b>	jennifer.warren@lmco.com
<b>City:</b>	Arlington	<b>State:</b>	VA
<b>Country:</b>	USA	<b>Zipcode:</b>	22202 -
<b>Attention:</b>	Ms Jennifer Warren		

*With Condition*



File # SES-STA-20090615-00734

Call Sign \_\_\_\_\_ Grant Date 7/20/09  
(or other identifier)

From 7/21/09 Term Dates To: 10/21/09

Approved: [Signature]  
*Chief, Satellite Engrs. Sr.*

Attachment

SES-STA-20090615-00734

Condition:

All operations shall be on an unprotected and non-harmful interference basis, *i.e.*, Lockheed Martin Corporation shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station.

*With Condition*



File # SES-STA-2009 0615-00734

Call Sign \_\_\_\_\_ Grant Date 7/20/09  
(or other identifier)

Term Dates  
From 7/21/09 To: 10/21/09

Approved: *Boyd D. Mallery*  
*Chief Satellite Eng'g. Br.*

<b>2. Contact</b>	
<b>Name:</b> Stephen D. Baruch	<b>Phone Number:</b> 202-416-6782
<b>Company:</b> Lerman Senter PLLC	<b>Fax Number:</b> 202-429-4626
<b>Street:</b> 2000 K Street, N.W. Suite 600	<b>E-Mail:</b> sbaruch@lermansenter.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20006 -
<b>Attention:</b>	<b>Relationship:</b> 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 07/21/2009	
7. CityCarpentersville	8. Latitude (dd mm ss.s h) 40 38 39.1 N

9. State NJ	10. Longitude (dd mm ss.s h) 75 11 27.8 W
11. Please supply any need attachments. Attachment 1: Narrative Exhibit                      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; margin: 10px 0;">STA to permit operation of 14.2m Ku-band antenna for provision of TT&amp;C services during launch and transfer orbit operations of JCSAT-12. See Attachment for details of proposed operation.</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 A. Warren	15. Title of Person Signing Vice President, Technology Policy & Regulation
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).	

**FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

**Lockheed Martin Corporation**  
**Carpentersville, New Jersey Earth Station STA**  
**June 2009**  
**Attachment**

**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) to provide telemetry, tracking and control (“TT&C”) functions during the post-launch and transfer orbit phases of operation for the JCSAT-12 satellite.<sup>1</sup> JCSAT-12 is currently scheduled for launch on August 18, 2009, and Lockheed Martin would need to begin test transmissions in preparation for the launch approximately on or about July 21, 2009.<sup>2</sup> Lockheed Martin specifically seeks authority to transmit telecommand signals on the 14.496 GHz and 13.9935 GHz (on-orbit contingency only) frequencies and to receive telemetry signals from the satellite on the 12.74835 GHz and 12.74975 GHz frequencies. Lockheed Martin is requesting the duration of this STA to be three months from July 21, 2009, in the event of any slippage in the anticipated dates of the various phases of operation, and expects that all station operations will be completed for JCSAT-12 within 30 days after the satellite is launched.

Of the transmit frequencies Lockheed Martin seeks to use for the JCSAT-12 TT&C support operations, only the 14.496 GHz frequency is included in Lockheed Martin’s former license for Call Sign E920702 and current application for the Ku-band antenna in File No. SES-LIC-20081130-01443 (under Call Sign E7541). Lockheed Martin emphasizes, however, that its proposed transmissions on both the 14.496 GHz and 13.9935 GHz frequencies will use the emission designators for telecommand that are proposed in the pending license application. Specifically, transmissions would use the 3M00F3D and 3M00G7D emission designators. When no commands are being sent, the CW carrier (3M00N0N) 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.

The maximum EIRP per carrier would be as specified in the Schedule B for the 14.496 GHz frequency. For the 13.9935 GHz frequency, the maximum EIRP per carrier would be limited to 85 dBW, in order to ensure that operations on that frequency are compliant with Section 25.204(D) of the Commission’s Rules (which specifies that the e.i.r.p. of any emission from a 13.75-14 GHz band earth station must be at least 68 dBW and not more than 85 dBW,

---

<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 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.

<sup>2</sup> The test transmissions that would begin on July 21 would last for approximately five 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.

with a minimum antenna diameter of 4.5 meters). 47 C.F.R. § 25.204(f). The 13.9935 GHz frequency included in this STA request is on a contingency basis. If the transfer orbit operations for the JCSAT-12 satellite proceed as planned, this telecommand frequency would not be used until the spacecraft is on station over Japan (i.e., transmissions to the satellite would be conducted from the Lockheed Martin earth station). To the extent that any immediate post-launch and transfer-orbit operations on the 13.9935 GHz frequency could be with a spacecraft that has not yet reached geostationary orbit, Lockheed Martin notes that such use of the 14.2 meter Ku-band antenna at the Carpentersville facility is consistent with Section 25.202(a)(1) of the Commission's Rules, which limits the use of the 13.75-14 GHz uplink by non-geostationary systems to gateway earth station operations. *See* 47 C.F.R. § 25.202(a)(1), Note 12.

All of Lockheed Martin's proposed TT&C operations in support of the JCSAT-12 launch will be on a strictly non-harmful interference, non-protected basis. With respect to the proposed telemetry receive operations on 12.74835 GHz and 12.74975 GHz, Lockheed Martin notes that the 12.7-12.75 GHz band is allocated for FSS (space-to-Earth) operations in ITU Region 3 (where the JCSAT-12 is intended for permanent operation at around 128° E.L.). Because the reception of telemetry signals at 12.74 GHz is inconsistent with the allocation table in both ITU Region 2 and the United States, Lockheed Martin requests a waiver of Section 2.106 and Section 25.202(a)(1) of the Commission's Rules to permit it to receive these signals from JCSAT-12, at the Carpentersville earth station, on a limited duration basis. Lockheed Martin believes that such operations – which it 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 JCSAT-12 satellite is controlled while over North America, and Lockheed Martin's earth station thus will serve a limited-duration, but nonetheless vital function. Under these circumstances, where the purpose of the allocation rules is not contravened and the public interest is clearly advanced, a waiver grant to Lockheed Martin is appropriate.

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to, or reception from, JCSAT-12 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 this 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. For this reason, Lockheed Martin does not provide a new analysis of non-ionizing radiation for the antenna, or any of the detailed transmission/reception parameters for the signals. Instead, Lockheed Martin incorporates by reference the radiation hazard study and Schedule B information that were included with the November 2008 modification application in File No. SES-LIC-20081103-01443, as amended.

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 JCSAT-12 satellite, for a term of three months commencing July 21, 2009.

Attachment 1 to this Exhibit contains Lockheed Martin's requests for waivers of Sections 25.137 and 25.114 of the Commission's Rules.



**Requests for Waivers of Sections 25.114 and 25.137**

Section 25.137 of the Commission's Rules, 47 C.F.R. § 25.137, specifies that earth station applicants requesting authority to operate with a non-U.S. licensed space station to serve the United States must demonstrate that effective competitive opportunities exist and must provide the same technical information that Section 25.114 of the Commission's Rules requires of space station applicants. As explained below, a waiver of both Section 25.137 and Section 25.114 is appropriate here for the launch and transfer-orbit phase TT&C operations that Lockheed Martin will be providing through its earth station as part of a global TT&C network.

Lockheed Martin is seeking to provide mission-critical services to ensure the operational integrity of a newly-launched satellite, manufactured in the United States at Lockheed Martin facilities for a Japanese satellite services provider. Lockheed Martin emphasizes that the TT&C support services that would be provided under this STA to the Japanese operator of the JCSAT-12 satellite are to be provided through the Carpentersville, NJ earth station on a very limited duration basis, and will cease once the JCSAT-12 satellite moves out of view of the Carpentersville, New Jersey earth station and toward its permanent home in an orbital location that serves Japan. Lockheed Martin is not the operator of the JCSAT-12 satellite, and will be using the Carpentersville, NJ Ku-band antenna to provide post-launch and transfer-orbit TT&C services as part of global network of TT&C operators for the spacecraft.

If Section 25.137 and Section 25.114 are deemed applicable to Lockheed Martin's proposed STA, the rule provisions should be waived. Section 25.137 is designed to ensure that U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services in other countries. 47 C.F.R. § 25.137(a). Competitive opportunities for U.S. licensees are not relevant here, JCSAT-12 will not be providing any "services" while in communication with Lockheed Martin's earth station; instead, the satellite will be providing telemetry data and will be receiving telecommands as it is being moved from its orbital injection point to its destination on the geostationary arc. Despite the fact that Japan (the authorizing administration for JCSAT-12) is a WTO member, and thus is presumed to provide effective competitive opportunities, the underlying rule was not designed or intended to be applied to situations such as Lockheed Martin's fleeing post-launch/transfer-orbit use. Grant of a waiver to Lockheed Martin would not undermine the rule's purpose, and the public interest would clearly be advanced when there is a secure space object and no interruptions of others' use of the geostationary arc. The public interest would also be advanced by the fact that the STA promotes the ability of a U.S. satellite manufacturer to meet the requirements of its overseas customers – and thus helps retain important manufacturing jobs in the United States and reduce the trade deficit.

For similar reasons, the comprehensive data submission for space-station applicants that is required by Section 25.114 of the Commission's Rules is not needed or even useful with respect to Lockheed Martin's proposed post-launch/transfer-orbit operation. Lockheed Martin will be providing telecommand and telemetry information for a satellite that is operating in a non-geostationary orbit on a very small subset of its ultimate communications payload. Section 25.114 and the associated Schedule S data elements pertain to a spacecraft that is in its

operational configuration on the geostationary arc. The information requested in Section 25.114 is thus not relevant to the limited-duration communications that will occur with the JCSAT-12 satellite while it is in non-geostationary orbit or in orbit at a non-permanent location.

Lockheed Martin will take every precaution to ensure the protection of government radiolocation facilities that operate in the upper portion of the 13.75-14 GHz band, and will coordinate with any potentially affected satellite operators in the upper part of the 14-14.5 GHz band (there are no radioastronomy sites potentially affected by operation of the Carpentersville, NJ facility in the 14.47-14.5 GHz portion of the band). Under these circumstances, where obtaining the information required by Section 25.114 would both be a burden on Lockheed Martin and not advance in any way the purpose for which the Commission's rules require such information (i.e., the prevention of harmful interference), waiver of the information requirements of Section 25.114 is warranted.