

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 to Provide TT&C for SES-15 During In Orbit Testing Using Antenna KA288

1. Applicant

Name: SES Americom, Inc. **Phone Number:** 202-478-7143
DBA Name: **Fax Number:** 202-478-7111
Street: 1129 20th Street NW **E-Mail:** petra.vorwig@ses.com
Suite 1000
City: Washington **State:** DC
Country: USA **Zipcode:** 20036
Attention: Ms Petra A Vorwig

File # SES-STA-20171026-01214
Call Sign KP288 Grant Date 11-16-17
(or other identifier) Term Dates
From: 11-19-17 To: 12-19-17
Approved: [Signature]



GRANTED
International Bureau

Applicant: SES Americom, Inc.
File No.: SES-STA-20171026-01214
Call Sign: KA288
Special Temporary Authority

SES Americom, Inc. is granted a special temporary authority for 30 days, beginning November 19, 2017, to operate a 6.1 meter earth station antenna (KA288) located at 34° 19' 31' N/ 118° 59' 44.4' W in Somis, California, to provide telemetry, tracking and command (TT&C) services for the SES-15 satellite (S2951) while it is located at 137° W.L. for in-orbit testing ("IOT"), using the following frequencies: 10700.50 MHz and 12199.50 MHz (space-to-Earth) and 13999 MHz, 14001 MHz and 14499 MHz (Earth-to-space), under the following conditions:

1. The maximum EIRP shall not exceed 85 dBW per NTIA manual US 356 for the uplink frequency: 13999 MHz within the coordinated emission and power limits.
2. All operators of satellite will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs, Currently the 24x7 contact information for the SES-15 (S2951) mission is as follows: Ph.: (805) 386-2712- Request to speak with Dave Coyle.
4. All operations under this grant of special temporary authority shall be on an unprotected and non-harmful interference basis. SES Americom, Inc.'s, KA288, shall not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating radio communication system.
5. In the event of any harmful interference under this grant of special temporary authority, SES Americom, Inc., KA288, must cease operations immediately upon notification of such interference, and must inform the Commission, in writing, immediately of such an event.
6. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending or future SES Americom, Inc. applications.
7. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at SES Americom, Inc.'s risk.
8. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.



File # SES-STA-20171026-01214
Call Sign KA288 Grant Date 11-6-17
(or other identifier)
Term Dates
From: 11-19-17 To: 12-19-17
Approved: [Signature] [Signature]

2. Contact	
Name: Karis Hastings	Phone Number: 202-599-0975
Company: SatCom Law LLC	Fax Number:
Street: 1317 F St, NW Suite 400	E-Mail: karis@satcomlaw.com
City: Washington	State: DC
Country: USA	Zipcode: 20004 --
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 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 11/19/2017	
7. City/Somis	
8. Latitude (dd mm ss.s h) 34 19 31.0 N	

9. State CA	10. Longitude (dd mm ss.s h) 118 59 44.4 W
11. Please supply any need attachments. Attachment 1: STA Narrative 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.) SES Americom, Inc. requests special temporary authority (STA) to operate antenna KA288 to provide TT&C during in-orbit testing of SES-15 (call sign S2951) at 137 W.L. SES requests authority for 30 days beginning on November 19, 2017. See attached narrative.	
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. Yes <input checked="" type="radio"/> No <input type="radio"/>	
14. Name of Person Signing Petra A. Vorwig	15. Title of Person Signing Senior Legal & Regulatory Counsel
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).	

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
SES Americom, Inc.)	SES-STA-_____ - _____
)	Call sign KA288
Request for Special Temporary Authority to Provide)	
TT&C for SES-15 at 137° W.L.)	

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

SES Americom, Inc. (“SES”) respectfully requests Special Temporary Authority (“STA”) to use its KA288 earth station located in its South Mountain, California teleport¹ to communicate with SES-15 at 137° W.L. in order to provide telemetry, tracking and command (TT&C) services for the satellite while it is located at 137° W.L. for in-orbit testing (“IOT”). Authority is sought for a period of up to 30 days, commencing on or around November 19, 2017. SES requests authority for the earth station to communicate with the Gibraltar-licensed SES-15 satellite to provide TT&C services.

SES Satellites (Gibraltar) Limited received market access to provide service into the United States from 129.15° W.L. using the Ku- and Ka-bands as well as to operate the WAAS payload in the L- and conventional and extended C-bands.² SES-15 was launched on May 18, 2017 and is currently en route to its test orbital location at 137° W.L. SES-15 will be located at 137° W.L. +/-0.1 degrees during IOT. The proposed stationkeeping volume will not

¹ SES Americom, Inc., Call Sign KA288, File No. SES-MFS-20160527-00459, granted July 27, 2016.

² SES Satellites (Gibraltar) Limited, (Call Sign S2951), File No. SAT-MPL-20160718-00063, granted Dec. 14, 2016; modifying File No. SAT-PPL-20160126-00007, granted July 12, 2016 (“SES-15 Grant”).

overlap with any other satellite. SES seeks earth station STA to provide TT&C while SES-15 is located at 137° W.L. using the following frequencies:

10700.5 MHz and 12199.5 MHz	Telemetry
13999 MHz, ³ 14001 MHz and 14499 MHz	Command

As discussed below, performing IOT while SES-15 is at 137° W.L. rather than at 129.15° W.L. will permit testing to occur without disruption to existing customers at 129.15° W.L. and will not adversely affect the operation of any adjacent satellites.

Grant of STA Will Serve the Public Interest. Grant of SES's request to position SES-15 at 137° W.L. during testing is in the public interest. By testing SES-15 at this location, SES will minimize the risk of interference to other satellites operating at the nominal 129° W.L. orbital location. Testing will allow SES to ensure that the satellite's communications payload is fully operational at the time it arrives at its final orbital location, thereby avoiding any interruption in service that otherwise might be associated with spacecraft testing. Additionally, STA to provide TT&C will ensure safe satellite operations during the testing and drift operations.

No Harmful Interference to Other Spacecraft. Testing the SES-15 Ku-band payload at 137° W.L. will not cause harmful interference to the operations of any other spacecraft due to orbital angular separation, frequency diversity and/or geographically diverse beam coverage. Except for SES's AMC-4 spacecraft, there are no satellites within +/- 6 degrees

³ SES Satellites (Gibraltar) Limited was granted a waiver of Section 25.202(g) to conduct command operations using the 13999 MHz frequency. *See id.*, Attachment to Grant at 3, Condition 6.

of 137° W.L. operating in the Ku-band. SES will manage the operations of its satellites to prevent interference.

No Harmful Interference to Terrestrial Services. A detailed description of the TT&C operations is provided in Attachment 1. SES will conduct all operations on a non-harmful interference basis and will cease transmissions promptly in the event SES receives a complaint of harmful interference regarding its operations.

Waiver Requests. SES seeks any necessary waiver of footnote NG52 in order to conduct domestic operations in the extended Ku-band downlink spectrum in order to receive telemetry from the satellite, and SES seeks any necessary waiver of Section 25.210(j) of the Commission's rules in order to permit communications with SES-15 at 137° W.L. with an east-west stationkeeping tolerance of +/- 0.1 degree during the IOT operations. Grant of these waivers is consistent with Commission policy:

The Commission may waive a rule for good cause shown. Waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the general rule. Generally, the Commission may grant a waiver of its rules in a particular case if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.⁴

Section 2.106 Footnote NG52. SES seeks a waiver of footnote NG52 to permit the reception of U.S. domestic services in the 10700.5 MHz frequency on an unprotected, non-interference basis. The Commission has granted a waiver for SES-15 to provide domestic service in these bands.⁵ Footnote NG52 was intended to preserve access to the 10.7-11.7 GHz

⁴ *PanAmSat Licensee Corp.*, 17 FCC Rcd 10483, 10492 (Sat. Div. 2002) (footnotes omitted).

⁵ SES-15 Grant, Attachment at 2, Condition 3.

spectrum for terrestrial fixed service (“FS”) stations by limiting FSS use of the band to international operations only.⁶ SES-15 will meet the power flux density limits on the ground to protect FS operations, and the number of antennas that will be used to communicate in these bands will be limited, thereby ensuring protection of FS services. Moreover, because SES seeks authority to receive in this spectrum on an unprotected basis, FS use of the band will not be constrained. Therefore, grant of the requested waiver will not undermine the purpose of the rule.

Section 25.210(j): Section 25.210(j) specifies that geostationary space stations “must be maintained within 0.05° of their assigned orbital location in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance.”⁷ Here, SES is seeking authority to communicate with SES-15 while the satellite is maintained with a +/- 0.1 degree stationkeeping tolerance during the limited period of IOT operations. The relaxed stationkeeping tolerance will minimize interruptions to the payload testing operations due to stationkeeping maneuvers, which would delay the satellite’s on-station start of operations. It will also conserve fuel for future satellite operations. Furthermore, the SES-15 stationkeeping volume will not overlap with that of other satellites near 137° W.L. and therefore there will be no adverse effect on the operations of other spacecraft.

Protective Conditions. SES will coordinate its test and TT&C operations with all potentially affected operating satellite networks and will operate only the Ku-band TT&C payload of the SES-15 spacecraft during satellite drift. All testing will be conducted on an

⁶ See 47 C.F.R § 2.106, Footnote NG52. This policy was previously codified in footnote NG104.

⁷ 47 C.F.R. § 25.210(j).

unprotected, non-harmful interference basis, and SES operations will cease immediately upon notification of harmful interference.⁸

SES hereby certifies that no party to this application is subject to a denial of benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

For the foregoing reasons, SES respectfully requests special temporary authority to operate its KA288 earth station to provide TT&C for the SES-15 spacecraft during IOT for a period of up to 30 days commencing on or around November 19, 2017. Grant of the requested authority will permit testing of the spacecraft without affecting services to customers and will permit a seamless transition of services.

Respectfully submitted,
SES Americom, Inc.

By: /s/ Petra A. Vorwig

Of Counsel

Karis A. Hastings
SatCom Law LLC
1317 F Street, N.W., Suite 400
Washington, D.C. 20004
Tel: (202) 599-0975

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SES Americom, Inc.
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Washington, D.C. 20036

Dated: October 26, 2017

⁸ The 24/7 point of contact for SES during IOT and drift is Payload Management Operations Center Level 1, +1 410 970 7570; +1 800 772 2363; pmocl1@ses.com.

Attachment 1

Call Sign: KA288

Site Details

Contact Information:

Dave Coyle
805 386 2712

Address:

5990 Solano Verde
Somis, California 93066

Geographic Coordinates:

Latitude: 34° 19' 31.0" N

Longitude: 118° 59' 44.4"W

Site Elevation:

311.0 meters

Antenna Details

Antenna ID: TK1
Manufacture/Model: Vertex/6.1KPK
Antenna Size: 6.1 meters
Antenna Gain Transmit: 57.1 dBi at 14.0 GHz
Antenna Gain Receive: 55.7 dBi at 12.0 GHz
Height Above Ground Level: 7.0 meters
Height Above Sea Level: 318.0 meters
Total Input Power at the Flange: 650.0 watts
Total EIRP for the test Carrier: 85.2 dBW

TT&C Operational Details

Frequency (MHz)	Transmit /Receive	Polarization	Emission Designator	Max EIRP per Carrier (dBW)	Max EIRP Density per Carrier (dBw/4kHz)
10700.5	R	Horizontal and Vertical Linear	500KF9D	0.0	0.0
12199.5	R	Horizontal and Vertical Linear	500KF9D	0.0	0.0
13999	T	Horizontal and Vertical Linear	1M00F9D	73.1	49.1
14001	T	Horizontal and Vertical Linear	1M00F9D	73.1	49.1
14499	T	Horizontal and Vertical Linear	1M00F9D	73.1	49.1