

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

In the Matter of)
)
SES Americom, Inc.) SES-STA-_____-_____
) Call sign E160139
Request for Special Temporary Authority to)
Conduct In-Orbit Testing with SES-15 at 137° W.L.)

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

SES Americom, Inc. (“SES”) respectfully requests Special Temporary Authority (“STA”) to use its E160139 earth station located in its South Mountain, California teleport¹ to communicate with SES-15 at 137° W.L. in order to perform in-orbit testing (“IOT”) of the satellite’s Wide Area Augmentation System (“WAAS”) payload. 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 test the receive and transmit capability of the WAAS payload.

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 E160139, File No. SES-LIC-20160725-00674, filed July 25, 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.

overlap with any other satellite. SES seeks earth station STA to perform testing of the SES-15 WAAS payload using the following frequency bands:

6628.27-6650.27 MHz	Uplink
6679.42-6701.42 MHz	Uplink
3700.2 MHz	Downlink of satellite beacon
1165.45-1187.45 MHz	Downlink of WAAS transmissions
1564.42-1586.42 MHz	Downlink of WAAS transmissions

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 test the WAAS payload on SES-15 at 137° W.L. 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 WAAS 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.

No Harmful Interference to Other Spacecraft. Testing the SES-15 WAAS 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. SES has initiated coordination of the proposed IOT operations with other

satellites operating in the above bands and positioned near 137° W.L. to ensure no harmful interference will be caused to nearby satellites.

No Harmful Interference to Terrestrial Services. Transmissions associated with IOT of SES-15 will not cause harmful interference to any co-primary terrestrial services in the conventional C-band. The earth station to be used for in-orbit testing of the satellite has been coordinated to communicate with satellites in an arc that includes 137° W.L. The earth station will not exceed the maximum output EIRP density specified in its license, except in the case of certain tests involving high-powered continuous wave (“CW”) for a short duration of time lasting from 30 minutes to several hours. A detailed description of the proposed IOT activities is provided in Attachment 1. SES will conduct all IOT 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 Request. 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 this waiver 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.³

³ *PanAmSat Licensee Corp.*, 17 FCC Rcd 10483, 10492 (Sat. Div. 2002) (footnotes omitted).

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.”⁴ 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 seeks authority for E160139 to communicate with SES-15 in the L-band and extended C-band frequencies in order to test the WAAS payload at 137° W.L. SES will coordinate its test 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 unprotected, non-harmful interference basis, and SES operations will cease immediately upon notification of harmful interference.⁵

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.

⁴ 47 C.F.R. § 25.210(j).

⁵ 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.

For the foregoing reasons, SES respectfully requests special temporary authority to operate its E160139 earth station to test the L-band and conventional and extended C-band WAAS payload on SES-15 at 137° W.L. 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

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Dated: October 10, 2017

Attachment 1

Call Sign: E160139

Site Details

Contact Information:

David Coyle
805-386-2712

Address:

5990 Solano Verde Dr.
Somis, California 93066

Geographic Coordinates:

Latitude: 34 °19 '32.0 "N

Longitude: 118 °59 '44.0 "W

Site Elevation:

312.0 meters

Antenna Details

Antenna ID: SMWAAS
Manufacture/Model: Vertex 11m
Antenna Size: 11.0 meters
Antenna Gain Transmit: 55.7 dBi at 6 GHz
Antenna Gain Receive: 52.0 dBi at 4 GHz
Height Above Ground Level: 15.0 meters
Height Above Sea Level: 327.0 meters
Total Input Power at the Flange: 500.0 watts
Total EIRP for the test Carrier: 46.38 dBW

Operational Details

Frequency (MHz)	Transmit /Receive	Polarization	Emission Designator	Max EIRP per Carrier (dBW)	Max EIRP Density per Carrier (dBw/4kHz)
3700.2	R	Left and Right Circular	N0N	0.0	0.0
1165.45-1187.45	R	Left and Right Circular	N0N	0.0	0.0
1564.42-1586.42	R	Left and Right Circular	N0N	0.0	0.0
6628.27-6650.27	T	Left and Right Circular	N0N	81	81
6679.42-6701.42	T	Left and Right Circular	N0N	81	81