

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

In the Matter of	)	
	)	
SES AMERICOM, INC.	)	File No. SES-STA-_____
	)	Call Sign KB27
Request for Special Temporary Authority to	)	
Perform Testing with SES-11 at 142.5° W.L.	)	

**REQUEST OF SES AMERICOM, INC.**

SES Americom, Inc. (“SES”) respectfully requests special temporary authority (“STA”) for its KB27 earth station to communicate with the SES-11 spacecraft at 142.5° W.L. in order to perform in-orbit testing (“IOT”) of the satellite. Authority is sought for a period of up to 30 days, commencing eleven days following launch of SES-11, which could occur as early as the end of September 2017. Specifically, SES requests authority for the earth station to communicate with the Gibraltar-licensed SES-11 C-band payload in order to: (1) test the transmission capability of the payload, and (2) perform Tracking, Telemetry and Command (“TT&C”) in the C-band while the satellite is at 142.5° W.L.<sup>1</sup>

SES-11 is a dual-licensed spacecraft that will operate at the nominal 105° W.L. orbital location. The Commission has issued a license for the satellite’s Ku-band payload, which

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<sup>1</sup> The Commission has granted a space station STA to permit SES-11, which also has a U.S.-licensed Ku-band payload, to be positioned at 142.5° W.L. during IOT. SES Americom, Inc., (Call Sign S2964), File No. SAT-STA-20170526-00080, granted July 7, 2017 (“SES-11 Space Station STA”).

will replace the Ku-band capacity of AMC-15, and has granted U.S. market access for the satellite's Gibraltar-licensed C-band payload, which will replace the AMC-18 satellite.<sup>2</sup>

Following launch of SES-11, SES proposes to position the satellite at 142.5° W.L. for IOT. SES-11 will be located at 142.5° W.L. +/-0.1 degrees during IOT. The proposed stationkeeping volume will not overlap with any other satellite. SES seeks earth station STA to perform testing of the SES-11 C-band payload and associated TT&C.

As discussed below, performing IOT at 142.5° W.L. rather than at 105° W.L. will permit testing to occur without disruption to existing customers at 105° W.L. and will not adversely affect the operation of any adjacent satellites. SES seeks STA to support tests in the following bands.

3700-4200 MHz	Downlink
5925-6425 MHz	Uplink

***Grant of STA Will Serve the Public Interest.*** Grant of SES's request to test SES-11 at 142.5° W.L. is in the public interest. By testing SES-11 at this location, SES will minimize the risk of interference to its other satellites operating at the nominal 105° W.L. orbital location. Testing will allow SES to ensure that the satellite's C-band 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.*** Positioning and testing SES-11 at 142.5° W.L. will not cause harmful interference to the operations of any other spacecraft due to

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<sup>2</sup> See SES Americom, Inc., File No. SAT-LOA-20160512-00047 and SES Satellites (Gibraltar) Ltd, File No. SAT-PPL-20160512-0048 (together, the "SES-11 Applications"). These applications were combined under a single call sign, S2964, and granted on December 7, 2016.

orbital angular separation, frequency diversity and/or geographically diverse beam coverage. SES has coordinated the proposed TT&C and IOT operations with other C-band satellites positioned near 142.5° W.L. There are no other operators nearby with frequency overlap in the C- band. The nearest satellites operating in the C-band are operated by SES. In order to facilitate coordination with nearby C-band spacecraft, SES intends to use only Ku-band frequencies for TT&C while drifting the satellite from 142.5° W.L. to 104.95° W.L.

***No Harmful Interference to Terrestrial Services.*** Transmissions associated with IOT of SES-11 will not cause harmful interference to any co-primary terrestrial services in the conventional C-band. The C-band earth station to be used for in-orbit testing of the satellite has been coordinated to communicate with satellites in an arc that includes 142.5° 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. 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 a limited waiver of Section 25.210(j) of the Commission’s rules in order to operate SES-11 at 142.5° 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.<sup>3</sup>

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.”<sup>4</sup> Here, SES is seeking authority to operate SES-11 with a relaxed stationkeeping tolerance of +/- 0.1 degree during the limited period of IOT operations. The Commission has already granted a similar waiver request when it authorized SES to operate the Ku-band payload of SES-11 at 142.5° W.L. with +/-0.1 degree stationkeeping.<sup>5</sup> SES requests a waiver because 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 proposed operations will not result in any overlap with other satellites near 142.5° W.L. and therefore will not adversely affect the operations of other spacecraft.

***Protective Conditions.*** SES seeks authority for KB27 to communicate with SES-11 in the C-band frequencies in order to position and test SES-11 at 142.5° W.L. with +/-0.1 degree stationkeeping tolerance. SES will coordinate its drift and test operations with all potentially affected operating satellite networks and will operate only the Ku-band TT&C payload of the SES-11 spacecraft during satellite drift. All testing will be conducted on an

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

<sup>4</sup> 47 C.F.R. § 25.210(j).

<sup>5</sup> SES-11 Space Station STA, condition 6, at 2.

unprotected, non-harmful interference basis, and SES operations will cease immediately upon notification of harmful interference.<sup>6</sup>

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 KB27 earth station to test the C-band payload on SES-11 at 142.5° W.L. for a period of up to 30 days, commencing eleven days following the launch of SES-11 and to perform TT&C in the C-band while the satellite is operating at 142.5° W.L. Grant of the requested authority will permit testing of the spacecraft without affecting services to customers and will permit a seamless transition of services. As noted above, SES is preparing to launch SES-11 in September 2017 and requests action on this application to accommodate that schedule.

Respectfully submitted,

SES AMERICOM, INC.

By: /s/ Petra A. Vorwig

Of Counsel

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Dated: August 21, 2017

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<sup>6</sup> The 24/7 point of contact for SES during IOT and drift is Dave Coyle, Manager, South Mountain Earth Station, (805) 386-2710, dave.coyle@ses.com.