

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

SES Americom, Inc. (“SES”) respectfully requests special temporary authority (“STA”) for a period of 30 days beginning December 1, 2017, to permit SES to operate VSAT-type terminals with specified SES satellites. The temporary VSAT network operations will permit evaluation of the Ku-band spot beams of the SES-15 satellite (call sign S2951) at 129.15° W.L. prior to the scheduled commencement of commercial operations with the satellite in January 2018. Specifically, SES requests authority for thirteen 1.2 meter terminals positioned at a variety of locations in the contiguous United States and Hawaii to communicate with SES-1 at 101° W.L., SES-3 at 103° W.L., and SES-15 at 129.15° W.L.

SES Satellites (Gibraltar) Limited received market access for the Ku/Ka-band SES-15 satellite to serve the United States from 129.15° W.L.¹ SES-15 was launched on May 18, 2017 and following the completion of in-orbit testing, is expected to arrive at its assigned orbital location by December 22, 2017. After SES-15 arrives, there will be only a brief period before the satellite is scheduled to begin commercial operations during which testing of the Ku-band antennas can occur. In order to prepare for that testing process, SES plans to conduct initial operation of the VSAT terminals with the U.S.-licensed SES-1 and SES-3 satellites.

A full description of the antennas and the proposed operations, including a list of the locations at which the VSAT terminals will be positioned, is provided in Attachment 1. The terminals to be used are 1.2 meter Skyware Global model antennas that have previously been authorized by the Commission.² The VSAT terminals will transmit in the conventional Ku-band Earth-to-space frequencies, 14.0-14.5 GHz. During the operation with SES-1 and SES-3, the terminals will receive in the conventional Ku-band space-to-Earth frequencies, 11.7-12.2 GHz. When the terminals

¹ 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”).

² See, e.g., X2nSat, (Call Sign E140069), File No. SES-LIC-20140715-00602, granted Sept. 15, 2014.

are operating with SES-15, they will also receive in the following extended Ku-band and Appendix 30B band space-to-Earth frequencies: 10.7-10.95 GHz, 10.95-11.2 GHz, 11.2-11.45 GHz, and 11.45-11.7 GHz.

Operation of the VSAT terminals will be controlled remotely by SES gateway facilities that are authorized to communicate with the satellites being used, and these operations will be within the scope of the gateway facilities' existing authorizations. During the initial operations of the VSAT terminals with SES-1 and SES-3, the gateway earth stations used will be in Woodbine, MD (Call Signs E920698 & E140059).

During testing with SES-15, the gateway earth stations used will be in Brewster, WA (Call Sign E160015); Woodbine, MD (Call Sign E160021); and Somis, CA (Call Sign E160022). These gateways are authorized to communicate with the satellite in Ka-band frequencies in support of the Ku-band spot beams on SES-15.

The transmissions associated with the proposed tests will not cause harmful interference to the operations of any other spacecraft or terrestrial operators. The VSAT-type antennas will communicate with the U.S.-licensed SES-1 and SES-3 satellites and with SES-15, which has been authorized to serve the U.S. in Ku-band frequencies. In addition, and in any event, SES will conduct all test operations on a non-harmful interference basis, and will cease transmissions promptly in the event any harmful interference is caused by such operations.

SES seeks a waiver of footnote NG52 of the Table of Allocations in Section 2.106 to permit the reception of U.S. domestic services from SES-15 in the 10.7-11.7 GHz frequencies on an unprotected, non-interference basis. 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

The Commission has granted a waiver for SES-15 to provide domestic service in the 10.7-11.7 GHz frequencies.⁴ Footnote NG52 was intended to preserve access to the 10.7-11.7 GHz spectrum for terrestrial fixed service (“FS”) stations by limiting FSS use of the band to international operations only.⁵ 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.

Authorizing tests of the performance of SES-15 with these antennas is in the public interest. Such testing is necessary to prepare for commencement of commercial operations with the satellite to facilitate the transition of customer operations to SES-15.

For the foregoing reasons, SES respectfully requests special temporary authority for VSAT-type antennas to communicate with SES-1, SES-3, and SES-15 in order to evaluate the performance of the SES-15 spacecraft.

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

⁴ SES-15 Grant, Attachment at 2, Condition 3.

⁵ See 47 C.F.R § 2.106, Footnote NG52. This policy was previously codified in footnote NG104.

Attachment 1

Site Details

Contact Information:

Ramiro Reinoso, Senior Manager
Tel: 1 609 987 4169

Address:

4 Research Way
Princeton, NJ

Geographic Coordinates:

Various-CONUS, HI & AK, see below

Site Elevation:

Various

Antenna Details

Antenna ID: 1.2m
 Manufacture/Model: Skyware Global
 Antenna Size: 1.2 meters
 Antenna Gain Transmit: 43.3 dBi at 14.3 GHz
 Antenna Gain Receive: 41.8 dBi at 12.0 GHz
 Height Above Ground Level: Various
 Height Above Sea Level: Various
 Total Input Power at the Flange: 4 watts
 Total EIRP for the test Carriers: 49.3 dBW

Operational Details

Frequency (GHz)	Transmit/Receive	Polarization	Emission Designator	Max EIRP per Carrier (dBW)	Max EIRP Density per Carrier (dBw/4kHz)
10.7-10.95	R	H and V	N0N	0.0	0.0
10.7-10.95	R	H and V	150MG7W	0.0	0.0
10.95-11.2	R	H and V	N0N	0.0	0.0
10.95-11.2	R	H and V	150MG7W	0.0	0.0
11.2-11.45	R	H and V	N0N	0.0	0.0
11.2-11.45	R	H and V	150MG7W	0.0	0.0
11.45-11.7	R	H and V	N0N	0.0	0.0
11.45-11.7	R	H and V	150MG7W	0.0	0.0
11.7-12.2	R	H and V	N0N	0.0	0.0
11.7-12.2	R	H and V	150MG7W	0.0	0.0
14.0-14.5	T	H and V	N0N	49.3	49.3
14.0-14.5	T	H and V	400KG7W	49.3	29.3
14.0-14.5	T	H and V	1M50G7W	49.3	23.56
14.0-14.5	T	H and V	3M00G7W	49.3	20.55
14.0-14.5	T	H and V	6M00G7W	49.3	17.55

VSAT network/ Site and Hub locations:

Site	Lat. (Deg. N.)	Long (Deg. W.)	Hub for Dry Run with SES-1 and SES-3 (Ku/Ku)(Hub/VSAT)	Hub for SES-15 Tests (Ka/Ku) (Hub/VSAT)
Montrose, MI	43.13	83.81	Woodbine, MD (E920698 & E140059)	Woodbine, MD (E160021)
Ulm, MT	47.41	111.48	Woodbine, MD (E920698 & E140059)	Woodbine, MD (E160021)
Wilmington, NC	34.23	78.02	Woodbine, MD (E920698 & E140059)	Woodbine, MD (E160021)
Colorado Springs, CO	38.89	104.75	Woodbine, MD (E920698 & E140059)	Somis, CA (E160022)
Port St Lucie, FL	28.10	80.70	Woodbine, MD (E920698 & E140059)	Brewster, WA (E160015)
Panama Beach, FL	30.16	85.66	Woodbine, MD (E920698 & E140059)	Brewster, WA (E160015)
Coon Rapids, MN	45.18	93.28	Woodbine, MD (E920698 & E140059)	Somis, CA (E160022)
Windemere, TX	30.46	97.65	Woodbine, MD (E920698 & E140059)	Brewster, WA (E160015)
Phoenix, AZ	33.50	112.03	Woodbine, MD (E920698 & E140059)	Somis, CA (E160022)
Somis, CA	34.32	118.99	Woodbine, MD (E920698 & E140059)	Somis, CA (E160022)
Woodbine, MD	39.37	77.08	Woodbine, MD (E920698 & E140059)	Woodbine, MD (E160022)
Sunset Beach, HI	21.67	158.03	Woodbine, MD (E920698 & E140059)	Somis, CA (E160022)
Brewster, WA	48.09	119.78	Woodbine, MD (E920698 & E140059)	Brewster, WA (E160015)