

## **RADIO STATION AUTHORIZATION**

Name: SES AMERICOM, INC.

Call Sign: E110104

Authorization Type: Modification of License

File Number: SES-MFS-20120525-00476

Non Common Carrier

Grant date: 09/06/2012

2012 Expiration Date:

03/27/2027

Nature of Service: Direct to Home Fixed Satellite

Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

#### A) Site Location(s)

# Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1) 1	8000 Gainsford Ct Bristow, Prince William, VA 20136	38°47'0.6"N	77°34'25.4"W	86	83

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning March 27, 2012 (3 AM Eastern Standard Time) and ending March 27, 2027 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is September 6, 2013 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

#### **B) Particulars of Operations**

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarizati Code	on Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1) 14	4495.0000-14500.0000	H,V	1M00F8D	Tx	78.78	54.80	1		Analog TT&C
2) 14	4000.0000-14500.0000	H,V	1M0,0D7W	Tx	72.78	48.80	1		Digital Data
3) 14	1000.0000-14500.0000	H,V	1M00G7W	Tx	72.78	48.80	1		Digital Data
4) 14	4000.0000-14500.0000	H,V	36M0D7W	Tx	88.34	48.80	1		Digital Data
5) 14	1000.0000-14500.0000	H,V	36M0G7W	Tx	88.34	48.80	1		Digital Data
6) 14	1000.0000-14500.0000	H,V	500KD7W	Tx	69.77	48.80	1		Digital Data
7) 14	1000.0000-14500.0000	H,V	500KG7W	Тx	69.77	48.80	1		Digital Data
8) 14	1000.0000-14500.0000	H,V	77M0D7W	Tx	89.79	46.95	1		Digital Data

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#	Frequency (MHz)	Polarization Code	on Emission	Tx/Rx Mode	/Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services
9) 14	1000.0000-14500.0000	H,V	77M0G7W	Tx	89.79	46.95	1		Digital Data
10) 14	000.0000-14005.0000	H,V	1M00F8D	Tx	78.78	54.80	1		Analog TT&C
11) 13	3780.0000-14000.0000	H,V	1M00D7W	Tx	72.78	48.80	1		Digital Data
12) 13	3780.0000-14000.0000	H,V	1M00G7W	Tx	72:78	48.80	1		Digital Data
13) 13	3780.0000-14000.0000	H,V	36M0D7W	Tx	84.99	45.45	1		Digital Data
14) 13	3780.0000-14000.0000	H,V	36M0G7W	Tx	84.99	45.45	1		Digital Data
15) 13	3780.0000-14000.0000	H,V	77M0D7W	Tx	84.99	42.15	1		Digital Data
16) 13	780.0000-14000.0000	H,V	77M0G7W	Тх	84.99	42.15	1		Digital Data
17) 13	770.0000-13780.0000	H,V	10M0D7W	Тх	73.21	39.23	1		Digital Data
18) 13	770.0000-13780.0000	H,V	10M0G7W	Тх	73.21	39.23	1		Digital Data
19) 13	770.0000-13780.0000	H,V	4M00D7W	Тх	69.23	39.23	1		Digital Data
20) 13	770.0000-13780.0000	H,V	4M00G7W	Tx	69.23	39.23	1		Digital Data
21) <sub>13</sub>	750.0000-14000.0000	H,V	36M0D7W	Тх	78.77	39.23	1		Digital Data
22) 13	750.0000-14000.0000	H,V	36M0G7W	Тх	78.77	39.23	1		Digital Data
23) 13	750.0000-14000.0000	H,V	77M0D7W	Тх	82.07	39.23	1 .		Digital Data
24) 13	750.0000-14000.0000	H,V	77M0G7W	Тх	82.07	39.23	1		Digital Data
25) 13	750.0000-13770.0000	H,V	1M00D7W	Тх	72.78	48.80	1		Digital Data
26) 13	750.0000-13770.0000	H,V	1M00G7W	Тх	72.78	48.80	1		Digital Data
27) 13	750.0000-13770.0000	H,V	500KD7W	Tx	69.77	48.80	1		Digital Data
28) 13	750.0000-13770.0000	H,V	500KG7W	Tx	69.77	48.80	1		Digital Data
29) 11	700.0000-12200.0000	H,V	1M00F8D	Rx			1		Analog TT&C
30) 11	700.0000-12200.0000	H, V, L,	R 500KD7W	Rx			1		Digital Data
31) 11	700.0000-12200.0000	H,V,L,	R 500KG7W	Rx			1		Digital Data

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### B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands. The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

	Frequency	Polarization		Tx/Rx	Max EIRP /Carrier	Max EIRP Density /Carrier	Associated	Special Provisions (Refer to	Modulation/
#	(MHz)		Emission		(dBW)		Antenna	Section H)	Services
32)	11700.0000-12200.0000	H,V,L,R77	7M0D7W	Rx			1		Digital Data
33)	11700.0000-12200.0000	H,V,L,R 77	7M0G7W	Rx			1		Digital Data
34)	11450.0000-11700.0000	H,V 1M	100F8D	Rx			1		Analog TT&C
35)	11450.0000-11700.0000	H,V,L,R50	0KD7W	Rx			1		Digital Data
36)	11450.0000-11700.0000	H,V,L,R50	0KG7W	Rx			1		Digital Data
37)	11450.0000-11700.0000	H,V,L,R 77	7M0D7W	Rx			1		Digital Data
38)	11450.0000-11700.0000	H,V,L,R77	MOG7W	Rx			1		Digital Data
39)	10950.0000-11200.0000	H,V 1M	100F8D	Rx			1		Analog TT&C
40)	10950.0000-11200.0000	H,V,L,R50	00KD7W	Rx			1		Digital Data
41)	10950.0000-11200.0000	H,V,L,R50	0KG7W	Rx			1		Digital Data
42)	10950.0000-11200.0000	H,V,L,R 77	MOD7W	Rx			1		Digital Data
43)	10950.0000-11200.0000	H,V,L,R 77	MOG7W	Rx			1		Digital Data

### C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East West Limit Limit	Elevation (Degrees) East West Limit Limit	Azimuth (Degrees) East West Limit Limit	**********	Associated Antenna(s)
1)	13750.0000-14000.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	-14.59 1	
2)	14000.0000-14500.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	-5.02 1	
3)	14000.0000-14005.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	0.98 1	
4)	13750.0000-13770.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	-5.02 1	
5)	13770.0000-13780.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	-14.59 1	
6)	13780.0000-14000.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	-5.02 1	
7)	14495.0000-14500.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	0.98 1	
8)	10950.0000-11200.0000	10.0W-144.0W	08.7-09.0	104.5-254.7	1	
9)	11450.0000-11700.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	1	
10)	11700.0000-12200.0000	10.0W-144.0W	08.7-09.6	104.5-254.7	1	

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#### D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to All authorized U.S. Domestic (ALSAT) Satellites.
- 2) 1 to New Skies Satellite, N.V. 7 @ 20 W.L. S2854 (U.S.-licensed)
- 3) 1 to SES-4 @ 22 W.L. (S2828) (Netherlands-Licensed)
- 4) 1 to New Skies Satellite, N.V. 7 @ 20 W.L. S2463 (Netherlands-licensed)

#### E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
	1	1	11.3	Viasat	8016A	86	13.27 AGL/ 99.27 AMSL	
Max Ga	ins(s):	62.8	dBi @	14.0000 GHz	61.7 dBi @ 12.000	0 GHz		

Maximum total input power at antenna flange (Watts) =

1,859.00

Maximum aggregate output EIRP for all carriers (dBW) =

95.49

#### G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

#### H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 217 --- The "ALSAT" authority listed in this authorization as a point of communication is limited to communications in the 14.0-14.5 and 11.7-12.2 GHz bands only.
  - 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
  - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
  - 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.



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D12 Expiration Date:

03/27/2027

#### H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
  - 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and that the station is operational including the date of commencement of service and will remain operational during the license period unless the license is submitted for cancellation.
  - 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR 1.1307 (b) (5).
  - 5216 --- All operations shall be on a non-common carrier basis.
  - 6565 --- Telemetry, tracking and telecommand (TT&C) operations identified in part B, Particulars of Operation in this authorization shall be conducted at either or both edges, in accordance with 47 C.F.R. 25.202 (g). Frequencies, polarization and coding shall be selected to minimize interference into other satellite networks. Transmission and reception of TT&C signals not at a band edge is granted only if a waiver of 47 C.F.R. § 25.202(g) has been granted for the specific satellite and the satellite operator agrees.
- 90032 --- Waiver of 47 C.F.R. § 2.106 footnote NG 104 is granted for no more than two U.S. earth stations to perform TT&C with SES-4 (S2828) per grant of SAT-PPL-20110620-00112. This waiver is granted to Earth Stations E020071 and E110104.

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#### B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R.§ 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.

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