

S2347 SAT-MOD-20170316-00051 IB2017000705
SES Americom, Inc.
AMC-6



File # SAT-MOD-20170316-00051
Call Sign S2347 Grant Date 06/14/17
(or other identifier)
Term Dates see
From 06/14/17 To: conditions
Approved: Stephen J. Duall

Approved by OMB
3060-0678

Date & Time Filed: Mar 16 2017 3:14:31:840PM
File Number: SAT-MOD-20170316-00051

Stephen J. Duall
Chief, Satellite Policy Branch

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	


APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Modification to Reassign AMC-6 to 85.0 W.L. (call sign S2347)

1-8. Legal Name of Applicant

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

ATTACHMENT TO GRANT
SES Americom, Inc.
IBFS File No. SAT-MOD-20170316-00051

IBFS File No(s):	SAT-MOD-20170316-00051	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	SES Americom, Inc.	
Call Sign:	S2347	
Satellite Name:	AMC-6	
Orbital Location: (required station-keeping tolerance)	85.0° W.L. (+/- 0.05 degrees east/west)	
Administration:	United States of America ¹	
Nature of Service:	Fixed-Satellite Service; Direct-to-home (DTH) ²	
Scope of Grant:	Authority to provide fixed-satellite service from 85.0° W.L. in the 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth), 13.75-14.0 GHz, (Earth-to-space) and 14.0-14.5 GHz (Earth-to-space) frequency bands, including DTH in the 11.7-12.2 GHz (space-to-Earth) frequency band.	
Previous Grant(s):	See IBFS File Nos. SAT-MOD-20161014-00098, SAT-MOD-20050819-00163, SAT-LOI-19971222-00230, SAT-AMD-20000510-00089, and the updated orbital debris mitigation plan submitted in SAT-MOD-20150820-00059.	
Service Area(s):	CONUS, Hawaii, and Puerto Rico; parts of Alaska, Canada, and Mexico. See Schedule S and accompanying GIMS file.	
Frequencies:	11.45-11.7 GHz (space-to-Earth) 11.7-12.2 GHz (space-to-Earth) 13.75-14.0 GHz (Earth-to-space) 14.0-14.5 GHz (Earth-to-space) Telemetry, Tracking & Command center frequencies: 3700.5 MHz, 4199.5 MHz, 11.702 GHz, and 12.198 GHz (space-to-Earth); 6423.5 MHz (Earth-to-space)	
<p>Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission’s rules not waived herein. This grant is also subject to the following conditions:</p> <ol style="list-style-type: none"> 1. While at the 85.0° W.L. orbital location, SES Americom must maintain the AMC-6 spacecraft with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees. 2. In connection with the provision of service in any particular country, SES Americom is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country. 3. SES Americom must operate AMC-6 at the 85.0° W.L. orbital location in compliance with all existing or future coordination agreements for this location. In the absence of a coordination agreement, such communications must comply with applicable provisions of the ITU Radio Regulations as the Commission cannot guarantee the success of the required coordinations. 4. The operations of AMC-6 and associated earth stations must comport with the applicable uplink and downlink limits in 47 CFR § 25.140(a)(3) of the Commission’s rules, unless SES Americom coordinates 		

¹ SES Americom states that it will operate AMC-6 pursuant to an agreement with EchoStar Satellite Operating Corporation, which holds the license for the conventional Ku-band payload (11.7-12.2 GHz and 14.0-14.5 GHz frequency bands) of the AMC-16 Ku/Ka-band spacecraft located at 85.0° W.L. AMC-6 will operate in the extended Ku-band (11.45-11.7 GHz and 13.75-14.0 GHz) frequency bands under ITU network filing NSS-G4-10 of the Netherlands Administration.

² For purposes of this condition, DTH means the services subject to section 25.701 of the Commission’s rules. 47 CFR § 25.701. SES Americom submitted a supplement to this application clarifying that it does not propose to use the C-band to provide DTH. See Letter from Karis Hastings, Counsel, SES, to Marlene H. Dortch, Secretary, FCC (filed Apr. 5, 2017).

ATTACHMENT TO GRANT
SES Americom, Inc.
IBFS File No. SAT-MOD-20170316-00051

any non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 85.0° W.L. orbital location. SES Americom must also comport with the maximum power limits indicated in existing or future coordination agreements at 85.0° W.L. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 85.0° W.L. involving approved communications with U.S.-licensed earth stations.

5. SES Americom's use of the 11.45-11.7 GHz (space-to-Earth) frequency band is subject to footnote US211 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US211, which urges applicants for airborne or space station assignments to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference, consistent with footnote US74.
6. SES Americom's operation of the AMC-6 space station in the 11.45-11.7 GHz (space-to-Earth) frequency band is limited to international operations in accordance with footnote NG52 to the United States Table of Frequency Allocations. 47 CFR § 2.106, NG52.
7. Pursuant to footnote US342 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US342, services operating in the 14.47-14.5 GHz band shall take all practicable steps to protect the radio astronomy service from harmful interference.
8. On our own motion, waiver of section 25.202(g) of the Commission's rules, 47 CFR § 25.202(g), IS GRANTED. Section 25.202(g) requires, in relevant part, that telemetry, tracking, and command signals be transmitted within assigned frequency bands. SES previously sought and was granted waiver of section 25.202(g) to conduct TT&C with AMC-6 at the 67.0° W.L. orbital location using center frequencies at 3700.5 MHz (space-to-Earth), 4199.5 MHz, (space-to-Earth), and 6423.5 MHz (Earth-to-space), which were outside the frequency bands in which AMC-6 was providing service.³ Similarly, we grant a waiver for TT&C operations using these same center frequencies at the 85.0° W.L. orbital location based upon the following findings: (a) operations in the C-band have already been coordinated by SES Americom for the AMC-2 space station at the nominal 85.0° W.L. orbital location, and therefore operation of an additional satellite will have minimal impact on adjacent satellite operations; (b) TT&C operations using the 3700.5 MHz, 4199.5 MHz, and 6423.5 MHz center frequencies must be on a non-harmful interference basis; and (c) SES Americom must accommodate future space station networks that are compliant with section 25.202(g) of the Commission's rules.
9. SES Americom's request for a waiver of sections 25.114(d)(14) and 25.283(c), 47 CFR §§ 25.114(d)(14) and 25.283(c) IS GRANTED. Section 25.283(c) specifies that space stations must discharge all stored energy sources at end-of-life of the space station. SES Americom indicates that AMC-6 is a Lockheed Martin A2100 spacecraft and was launched on October 26, 2000. SES Americom states that due to its design, AMC-6's two oxidizer tanks were sealed by firing pyrotechnic valves shortly after launch and will not be vented to depletion at the spacecraft's end of life. SES Americom states that the total mass of remaining oxidizer in each of the two tanks will be approximately 10.48 kilograms at end of life, with each tank volume being approximately 328.2 liters. We grant the requested waivers because AMC-6 was launched before section 25.283(c) was adopted and compliance would require direct retrieval of the satellite, which is not currently possible. In making this determination, however, we note that the information SES submitted for its waiver is not sufficient to support a finding that the intent of the rule would be satisfied by the described procedure for sealing the oxidizer tanks.
10. The U.S. Administration will not object to use of AMC-6 by the Administration of the Netherlands for bringing into use or continuing use of orbital assignments in the 11.45-11.7 GHz (space-to-Earth) and 13.75-14.0 GHz (Earth-to-space) frequency bands at the 85.0° W.L. orbital location contained in filing NSS-G4-10.
11. Pursuant to footnote US337 to the United States Table of Frequency Allocations, 47 CFR § 2.106,

³ IBFS File No. SAT-MOD-20161014-00098 (reissued Jan. 18, 2017).

ATTACHMENT TO GRANT
SES Americom, Inc.
IBFS File No. SAT-MOD-20170316-00051

US337, any earth station in the United States and its possessions communicating with the AMC-6 space station in the 13.75-13.8 GHz (Earth-to-space) frequency band is required to coordinate through National Telecommunications and Information Administration's (NTIA's) Interdepartment Radio Advisory Committee's (IRAC's) Frequency Assignment Subcommittee (FAS) to minimize interference to the National Aeronautics and Space Administration Tracking and Data Relay Satellite System, including manned space flight.

12. Operations of any earth station in the United States and its possessions communicating with the AMC-6 space station in the 13.75-14.0 GHz band (Earth-to-space) must comply with footnote US356 to United States Table of Frequency Allocations, 47 CFR § 2.106, US356, which specifies a mandatory minimum antenna diameter of 4.5 meters and the equivalent isotropically radiated powers (e.i.r.p.) of any emission should be at least 68 dBW and should not exceed 85 dBW. Operations of any earth station located outside the United States and its possessions communicating with the AMC-6 space station in the 13.75-14.0 GHz band (Earth-to-space) frequency band are subject to footnote 5.502 to the ITU Radio Regulations, which allows a minimum antenna diameter of 1.2 meters for earth stations of a geostationary satellite orbit network and specifies mandatory power limits.
13. Pursuant to footnote US356 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US356, in the 13.75-14.0 GHz band (Earth-to-space), receiving space stations in the Fixed-Satellite Service must not claim protection from radiolocation transmitting stations operating in accordance with the United States Table of Frequency Allocations.
14. Operations of any earth station in the United States and its possessions communicating with the AMC-6 space station in the 13.77-13.78 GHz band (Earth-to-space) must comply with footnote US357 to United States Table of Frequency Allocations, 47 CFR § 2.106, US357, which specifies that a required maximum e.i.r.p. density of emissions not exceeded 71 dBW in any 6 MHz band for communications with a space station in geostationary-satellite orbit. Operations of any earth station located outside the United States and its possessions communicating with the AMC-6 space station in the 13.77-13.78 GHz band (Earth-to-space) are subject to footnote 5.503 to the ITU Radio Regulations, which specifies a required maximum e.i.r.p. density of emissions (limit is dependent on antenna diameter) for communications with a space station in geostationary-satellite orbit.
15. Within 30 days of completion of the end-of-life maneuvers, SES Americom must send a letter to the Chief, Satellite Division, International Bureau, indicating the apogee and perigee of the AMC-6 disposal orbit.
16. Grant of this application does not change the expiration date of the authorization for the AMC-6 space station, which is November 22, 2023.⁴

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

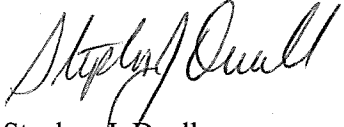
This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 CFR § 0.261, and is effective upon release.

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action	June 14, 2017
Date:	

⁴ IBFS File No. SAT-MOD-20150820-00059 (grant stamp, dated Nov. 5, 2015).

ATTACHMENT TO GRANT
SES Americom, Inc.
IBFS File No. SAT-MOD-20170316-00051

Term Dates	From: June 14, 2017	To: see conditions
Approved:  Stephen J. Duall Chief, Satellite Policy Branch		

9-16. Name of Contact Representative

Name:	Karis A. 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:	

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- b3. Amendment to a Pending Application
- b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)
- (N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States
- (N/A) b12. Application for Database Entry
- b13. Amendment to a Pending Database Entry Application
- b14. Modification of Database Entry

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
 Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network Not connected to a Public Switched Network N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz) b. Ku-Band (12/14 GHz)
 c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary-Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive Transmit-Only Receive-Only N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a -- authorization to add new emission designator and related service
- b -- authorization to change emission designator and related service
- c -- authorization to increase EIRP and EIRP density
- d -- authorization to replace antenna
- e -- authorization to add antenna
- f -- authorization to relocate fixed station
- g -- authorization to change frequency(ies)
- h -- authorization to add frequency
- i -- authorization to add Points of Communication (satellites & countries)
- j -- authorization to change Points of Communication (satellites & countries)
- k -- authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l -- authorization to change orbit location
- m -- authorization to perform fleet management
- n -- authorization to extend milestones
- o -- Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments. Yes No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government? Yes No

30. Is the applicant an alien or the representative of an alien? Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government? Yes No N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? Yes No N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? Yes No N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote. Exhibit A

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents. Yes No

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances. Yes No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Exhibit B

41. 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 No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (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. hereby requests modification of its license for the AMC-6 satellite (call sign S2347) to reassign the spacecraft to 85.0 W.L. Please see attached narrative.

Narrative

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing

Petra A. Vorwig

46. 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).

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.