

S2156 SAT-MOD-20100706-00154 IB2010002153  
SES Americom, Inc.  
AMC-5

Date & Time Filed: Jul 6 2010 5:25:39:256PM  
File Number: SAT-MOD-20100706-00154



File # SAT-MOD-20100706-00154  
Call Sign S2156 Grant Date 01/20/11  
(or other identifier)  
Term Dates See conditions  
From 01/20/11 To:  
Approved: *Stephen J. Duall*  
Stephen J. Duall  
Chief, Satellite Policy Branch

Approved by OMB  
3060-0678

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

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
S2156 (AMC-5) Relocation to 79.05 W.L.

1-8. Legal Name of Applicant

Name:	SES Americom, Inc.	Phone Number:	(202) 478-7137
DBA Name:		Fax Number:	(202) 478-7101
Street:	2001 L Street, NW Suite 800	E-Mail:	daniel.mah@ses.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036
Attention:	Daniel C. H. Mah		-

**Attachment to Grant**  
**Application of SES Americom, Inc.**  
**IBFS File No. SAT-MOD-20100706-00154**  
**Call Sign: S2156**

The request of SES Americom, Inc. (doing business as "SES WORLD SKIES") (SES Americom) for authority to operate its Ku-band space station, AMC-5 (Call Sign S2156), at the 79.05° W.L. orbital location, IBFS File No. SAT-MOD-20100706-00154, is GRANTED.<sup>1</sup> Accordingly, SES Americom is AUTHORIZED to provide Fixed Satellite Service (FSS), including Direct-to-Home FSS, at the 79.05° W.L. orbital location in the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) bands. SES Americom is also authorized to operate telemetry, tracking, and telecommand (TT&C) for AMC-5 at the 79.05° W.L. orbital location using the following frequencies: 14.001 GHz (telecommand), 11.701 GHz (telemetry), and 11.700 GHz (telemetry). Other than the change in orbital location, the conditions contained in prior authorizations otherwise remain in effect.<sup>2</sup> This authorization shall be in accordance with the technical specifications set forth in SES Americom's application, as supplemented by letters dated July 26 and November 4, 2010, the Commission's rules, and is subject to the following conditions:

1. SES Americom shall operate the AMC-5 space station at the 79.05° W.L. orbital location in compliance with all existing or future coordination agreements for that location.
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. While at the 79.05° W.L. orbital location, SES Americom shall maintain the AMC-5 space station with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.
4. We grant, on our own motion, waivers of Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules, 47 C.F.R. §§ 25.114(d)(14)(ii) and 25.283(c). These rules require an applicant to demonstrate that all stored energy will be vented at the spacecraft's end of life. AMC-5 is a Spacebus-2000 spacecraft that is not designed to vent all of its pressurized systems. Following launch of the spacecraft in 1998, a helium pressurant tank was permanently sealed by firing pyrotechnic valves. As a result, SES Americom states that at the end of AMC-5's operational life, there will be helium remaining in the tank that cannot be vented. SES Americom states that the residual helium in each of AMC-5's two helium tanks has a mass of 0.67 kg and a volume of 0.07085 m<sup>3</sup> at a temperature of 20° Celsius. The volume of each of the helium tanks at 0 bar is 0.0354 m<sup>3</sup>. We waive Sections 25.114(d)(14)(ii) and 25.283(c) in light of the fact the action taken to seal the helium tanks was taken prior to the adoption of this rule, and compliance would require direct retrieval of the spacecraft.
5. Grant of this authorization is based on SES Americom's representation that it will dispose of the AMC-5 spacecraft at end of life to a minimum altitude of 150 kilometers (perigee) above the geostationary arc, that it has reserved two kilograms of fuel for this purpose, and that fuel gauging uncertainty has been and will be taken into account in these calculations, using the methods set forth in SES Americom's application.

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<sup>1</sup> AMC-5 is currently operating at the 79.05° W.L. orbital location pursuant to grants of special temporary authority. See SAT-STA-20100615-00136 (granted July 16, 2010), SAT-STA-20100909-00192 (granted Sept. 22, 2010), SAT-STA-20101110-00234 (granted Nov. 18, 2010), and SAT-STA-20110106-00005 (granted Jan. 13, 2011).

<sup>2</sup> See IBFS File No. SAT-MOD-19980113-00002 (granted Oct. 28, 1998) and SAT-MOD-20050609-00117 (granted Jul. 20, 2005).

**Attachment to Grant**  
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**IBFS File No. SAT-MOD-20100706-00154**  
**Call Sign: S2156**

6. Within 30 days of completion of any end-of-life maneuvers for the AMC-5 spacecraft, SES Americom shall send a letter to the Chief, Satellite Division, International Bureau, indicating the apogee and perigee of the AMC-5 disposal orbit.
7. The license term for the AMC-5 space station (S2156) expires on November 20, 2013 (*i.e.*, 15 years starting from the date that SES Americom commenced operations on the AMC-5 space station).
8. SES Americom is afforded thirty days from the date of this action to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.
9. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.



\*with conditions

File # SAT-MOD-20100706-00154

Call Sign S2156 Grant Date 01/20/11  
(or other identifier)

Term Dates see  
From 01/20/11 To: conditions

Approved: *Stephen J. Duall*  
Stephen J. Duall  
Chief, Satellite Policy Branch

9-16. Name of Contact Representative

<b>Name:</b>	Karis A. Hastings	<b>Phone Number:</b>	(202) 637-5767
<b>Company:</b>	Hogan Lovells US LLP	<b>Fax Number:</b>	(202) 637-5910
<b>Street:</b>	555 Thirteenth Street, NW	<b>E-Mail:</b>	karis.hastings@hoganlovells.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20004-1109
<b>Attention:</b>		<b>Relationship:</b>	

CLASSIFICATION OF FILING

<p>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.</p> <p><input type="radio"/> a1. Earth Station</p> <p><input checked="" type="radio"/> a2. Space Station</p>	<p>(N/A) b1. Application for License of New Station</p> <p>(N/A) b2. Application for Registration of New Domestic Receive-Only Station</p> <p><input checked="" type="radio"/> b3. Amendment to a Pending Application</p> <p><input checked="" type="radio"/> b4. Modification of License or Registration</p> <p>b5. Assignment of License or Registration</p> <p>b6. Transfer of Control of License or Registration</p> <p><input type="radio"/> b7. Notification of Minor Modification</p> <p>(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite</p> <p>(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p>(N/A) b10. Other (Please specify)</p> <p>(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</p> <p>(N/A) b12. Application for Database Entry</p> <p><input type="radio"/> b13. Amendment to a Pending Database Entry Application</p> <p><input type="radio"/> b14. Modification of Database Entry</p>
<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).</p> <p><input type="radio"/> Governmental Entity</p> <p><input type="radio"/> Noncommercial educational licensee</p> <p><input checked="" type="radio"/> Other (please explain): No fee required pursuant to DA 10-1259 &amp; Section 1.1111(d).</p>	
<p>17d.</p> <p>Fee Classification</p>	

<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2156</p>	<p>19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:</p> <p>(a) Date pending application was filed:             (b) File number: SATMOD20050609000117</p>
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**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

<p>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?</p>	<p> <input checked="" type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> N/A </p>
<p>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.</p>	<p>Exhibit A</p>

**BASIC QUALIFICATIONS**

<p>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.</p>	<p> <input type="radio"/> Yes   <input checked="" type="radio"/> No </p>
<p>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.</p>	<p> <input type="radio"/> Yes   <input checked="" type="radio"/> No </p>

<p>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.</p>	<p style="text-align: center;"> <input type="radio"/> Yes                      <input checked="" type="radio"/> No         </p>
<p>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</p>	<p style="text-align: center;"> <input type="radio"/> Yes                      <input checked="" type="radio"/> No         </p>
<p>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.</p>	<p style="text-align: center;"> <input type="radio"/> Yes                      <input checked="" type="radio"/> No         </p>
<p>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.</p> <p style="text-align: right;">Exhibit B</p>	

<p>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.</p>	<p style="text-align: center;"> <input checked="" type="radio"/> Yes      <input type="radio"/> No         </p>
<p>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.</p>	<p style="text-align: center;"> <input type="radio"/> Yes      <input checked="" type="radio"/> No         </p>
<p>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?</p>	<p>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.)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>SES Americom, Inc. hereby seeks a modification of the license for AMC-5, call sign S2156, to relocate the satellite to the 79.05 W.L. orbital location and authority to operate the Ku-band communications payload of AMC-5 at 79.05 W.L. after relocation.</p> </div> <p>Narrative</p>

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  
Daniel C. H. Mah

46. Title of Person Signing  
Regulatory Counsel

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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).

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