

S2135 SAT-AMD-20110802-00142
SES Americom, Inc.
AMC-4

S2135 SAT-AMD-20110802-00142 IB2011003822
SES Americom, Inc.
AMC-4

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File # SAT-AMD-20110802-00142
Call Sign S2135 Grant Date 08/21/11
(or other identifier)
Term Dates duration of license term
From 08/21/11 To:
Approved: 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
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Amendment to AMC-4 (S2135) Modification to Add Beacon

1-8. Legal Name of Applicant

Name:	SES Americom, Inc.	Phone Number:	202-478-7181
DBA Name:		Fax Number:	202-478-7101
Street:	1129 20th Street NW Suite 1000	E-Mail:	suzanne.malloy@ses.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036
Attention:	Suzanne Malloy		

Attachment to Grant
IBFS File Nos. SAT-MOD-20110510-00086 & SAT-AMD-20110802-00142
Call Sign S2135
September 21, 2011

The request of SES Americom, Inc. (SES Americom), IBFS File Nos. SAT-MOD-20110510-00086 & SAT-AMD-20110802-00142, to modify its authorization to operate the AMC-4 space station (Call Sign S2135) at the 67° W.L. orbital location in the 11.45-11.7 GHz and 11.7-12.2 GHz (space-to-Earth) and 13.75-14.0 GHz and 14.0-14.5 GHz (Earth-to-space) frequency bands IS GRANTED. Specifically, SES Americom is authorized to operate the AMC-4 space station with a 0.1-degree change in the azimuth of the satellite's North American beam from the orientation previously authorized.¹ In addition, SES Americom is authorized to operate a C-band beacon signal with a center frequency of 4199.5 MHz (space-to-Earth). This authorization shall be in accordance with the technical specifications set forth in SES Americom's application, Federal Communication Commission (Commission) rules, and is subject to the conditions placed on operations of the AMC-4 space station at 67° W.L. in IBFS File No. SAT-MOD-20100623-00144 (granted November 4, 2010).

 GRANTED* International Bureau *with conditions	File # SAT-AMD-20110802-00142 SAT-MOD-20110510-00086	
	Call Sign <u>S2135</u> (or other identifier)	Grant Date <u>09/21/11</u>
	From <u>09/21/11</u>	Term Dates duration of To: <u>license term</u>
	Approved: <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch	

¹ See IBFS File Nos. SAT-MOD-20100623-00144 (granted November 4, 2010).

9-16. Name of Contact Representative

Name:	Karis A. Hastings, Esq.	Phone Number:	202-637-5767
Company:	Hogan Lovells US LLP	Fax Number:	202-637-5910
Street:	555 Thirteenth Street, NW	E-Mail:	karis.hastings@hoganlovells.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20004-1109
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
17c. Is a fee submitted with this application? ☒ If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). ☐ Governmental Entity ☐ Noncommercial educational licensee ☐ Other (please explain):	17d. Fee Classification CWY – Space Station Amendment(Geostationary)

18. If this filing is in reference to an existing station, enter: (a) Call sign of station: S2135	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: (a) Date pending application was filed: 05/10/2011 (b) File number: SATMOD2011051000086
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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

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.	Attachment 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.		

Attachment 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 amends its pending application for modification of the license for AMC-4 (S2135), File No. SAT-MOD-20110510-00086, to request the addition of a beacon frequency. 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 Suzanne H. Malloy	46. Title of Person Signing Executive Dir., International & Regulatory Affairs
-->	
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.

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

In the Matter of	)	
	)	
SES AMERICOM, INC.	)	File No. SAT-AMD-_____
	)	Call Sign S2135
Amendment to Application for Modification of	)	
AMC-4 Fixed-Satellite Space Station License	)	

AMENDMENT OF SES AMERICOM, INC.

SES Americom, Inc. ("SES Americom") hereby amends its pending request for modification of its license for the AMC-4 fixed-satellite space station at 67° W.L.¹ The amendment seeks authority for AMC-4 to use an additional C-band beacon frequency. Grant of the requested authority will serve the public interest by facilitating safe operation of the AMC-4 satellite and will not adversely affect any other operator. A completed FCC Form 312 is attached, and SES Americom is providing information relating to the proposed amendment to the AMC-4 Modification in the attached Technical Appendix.

AMENDMENT

AMC-4 is a C/Ku-band hybrid spacecraft operating at 67° W.L. The spacecraft offers communications service in the Ku-band only pursuant to the International Telecommunication Union ("ITU") filings of the Colombian Administration, as Notifying Administration for the Andean Community.² The satellite's C-band payload is not used to

¹ File No. SAT-MOD-20110510-00086 ("AMC-4 Modification"). No comments were filed on the AMC-4 Modification, which was placed on public notice on May 13, 2011. *See* Report No. SAT-00778, *Public Notice: Policy Branch Information* (rel. May 13, 2011).

² *See* Call Sign S2135, File No. SAT-MOD-20100623-00144, grant-stamped Nov. 4, 2010 ("AMC-4 at 67° W.L. Grant") (authorizing operations in the conventional Ku-band, 11.7-

provide service, but the Commission authorized specific frequencies for telemetry, tracking and command (“TT&C”) in both the C-band and the Ku-band.³

The pending AMC-4 Modification addresses a slight repointing of the satellite to improve service quality in the Caribbean and Central America. SES Americom has already implemented this change pursuant to a grant of Special Temporary Authority,⁴ and the modification requests authority to retain the altered coverage configuration on a long-term basis.

SES Americom now seeks to add a second C-band beacon frequency at 4199.5 MHz in order to enhance the reception of telemetry signals from the spacecraft. With the satellite’s original antenna orientation, SES Americom was able to receive C-band and Ku-band telemetry signals at both its Woodbine, NJ and South Mountain, CA earth stations. However, the change to the North American coverage has resulted in a loss of the Ku-band beacon signal at Woodbine. SES Americom seeks to add the 4199.5 MHz beacon to restore signal redundancy, as both Woodbine and South Mountain remain within the coverage area of the C-band telemetry beam.

Grant of the requested authority will not adversely affect any other operators. When SES Americom originally proposed relocating AMC-4 to 67° W.L., it coordinated its proposed C-band TT&C operations with Star One, which at the time operated StarOne B1 in the

12.2 GHz downlinks and 14.0-14.5 GHz uplinks, and extended Ku-band, 11.45-11.7 GHz downlinks and 13.75-14.0 GHz uplinks).

³ See *id.* (permitting use of C-band telecommand carrier at 6423.5 MHz, a C-band telemetry beacon at 3700.5 MHz, and two Ku-band telemetry beacons at 11.702 GHz and 12.198 GHz).

⁴ See Call Sign S2135, File Nos. SAT-STA-20110414-00072, grant-stamped Apr. 21, 2011; SAT-STA-20110510-00087, grant-stamped May 25, 2011.

C-band at 67.9° W.L.,⁵ as well as the StarOne C1 space station at 65° W.L. SES Americom has successfully coordinated the proposed additional C-band beacon at 4199.5 MHz with Star One.

WAIVER REQUEST

In connection with this amendment, SES Americom asks that the Commission grant any necessary waiver of Section 25.202(g) of the rules, which requires TT&C functions to be conducted at the edge of the allocated frequency band.⁶ When it authorized relocation of AMC-4 to 67° W.L., the Commission waived this rule with respect to the proposed C-band TT&C frequencies.⁷ The TT&C frequencies are at the edge of the C-band, but AMC-4 is not providing communications in the C-band at 67° W.L.⁸ SES Americom seeks authority to add the 4199.5 MHz C-band beacon pursuant to the same terms and conditions as specified in paragraph 15 of the AMC-4 at 67° W.L. Grant.

⁵ StarOne B1 has subsequently been retired and removed to a disposal orbit.

⁶ 47 C.F.R. § 25.202(g).

⁷ AMC-4 at 67° W.L. Grant, Attachment to Grant, ¶ 15.

⁸ *Id.*

CONCLUSION

SES Americom respectfully requests grant of the requested modification as amended to permit SES Americom to enhance its telemetry reception and operate AMC-4 with a coverage pattern that has been adjusted to respond to customer demand.

Respectfully submitted,

SES AMERICOM, INC.

By: /s/ Suzanne H. Malloy

Of Counsel

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Assistant Secretary
SES Americom, Inc.
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Dated: August 2, 2011

Technical Appendix

1. Introduction

This technical appendix is submitted in support of the amendment of SES Americom to its pending application for modification of the license for the AMC-4 spacecraft at 67° W.L. to add a C-band telemetry beacon at 4199.5 MHz. SES Americom incorporates by reference herein the technical information it has already provided with respect to AMC-4,¹ and provides here technical information that is changing as a result of the proposed amendment.

2. Gain Contours

SES Americom previously submitted contour maps showing the original and revised C-band and Ku-band EIRP patterns for typical horizontally and vertically polarized transponders of AMC-4 at 67° W.L.² The C-band maps show the coverage of the telemetry beam.

3. Link Budgets and Interference Analysis

SES Americom submitted an interference analysis to the Commission in connection with the initial operation of AMC-4 at 67° W.L. demonstrating that operation of AMC-4 is compatible with adjacent satellites and with the Commission's two-degree spacing requirements.³ That analysis addressed the TT&C operations as well. Additional information was provided with the AMC-4 Modification to show that the revised pointing of the AMC-4 North American beam has a negligible impact on the interference environment for adjacent satellites.⁴ SES Americom incorporates this interference analysis by reference herein. The added beacon frequency proposed in this amendment has also been coordinated with adjacent satellites.

4. Schedule S

As discussed above, the proposed modification of the AMC-4 license as amended will not result in any material changes to the spacecraft's operating characteristics or to the interference environment. As a result, the information requested in Schedule S duplicates information that is already on file with the Commission concerning the technical parameters of AMC-4's operation. In similar cases involving requests for minor operational changes, such as slight offsets from the nominal orbital position, the

¹ See File Nos. SAT-LOA-19940310-00007; SAT-AMD-19941114-00064; SAT-MOD-19970130-00012; SAT-MOD-19981023-00076; SAT-MOD-20080314-00072; SAT-MOD-20100623-00144; & SAT-MOD-20110510-00086.

² See File No. SAT-MOD-20110510-00086, Figures 1 to 8.

³ See Call Sign S2434, File No. SAT-MOD-20100623-00144, Technical Appendix, Annex 2.

⁴ See File No. SAT-MOD-20110510-00086, Technical Appendix, Section 3.

Satellite Division has not required the submission of a new Schedule S.⁵ Accordingly, SES Americom is not filing a new Schedule S with this application. SES Americom will nevertheless prepare and submit a Schedule S if requested to do so by the Satellite Division.

5. Orbital Debris Mitigation Statement

The information required under Section 25.114(d)(14) of the Commission's Rules regarding operations of AMC-4 at 67° W.L. is already on file with the Commission,⁶ and the proposed amendment does not alter the information previously provided.

⁵ See, e.g., File No. SAT-MOD-20040405-00076 (PanAmSat request for authority to operate SBS-6 at 74.05° W.L. rather than 74.0° W.L.).

⁶ See Call Sign S2434, File No. SAT-MOD-20100623-00144, Technical Appendix, Section 8.

DECLARATION OF KRISH JONNALAGADDA

I, Krish Jonnalagadda, hereby certify under penalty of perjury that I am the technically qualified person responsible for preparation of the technical information contained in the foregoing exhibit; that I am familiar with the technical requirements of Part 25; and that I either prepared or reviewed the technical information contained in the exhibit and that it is complete and accurate to the best of my knowledge, information and belief.

/s/ Krish Jonnalagadda
SES Americom, Inc.

Dated: August 2, 2011