

S2156 SAT-MOD-20110714-00126 IB2011003537
SES Americom, Inc.
AMC-5

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File # **SAT-MOD-20110714-00126**

Call Sign **S2156** Grant Date **09/14/11**
(or other identifier)

Term Dates see attached Approved by OMB
From **09/14/11** To: **Conditions** 3060-0678

Approved: *Stephen J. Duall*
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:
AMC-5 Mod for Expanded Stationkeeping and shift to 79.10

1-8. Legal Name of Applicant

Name:	SES Americom, Inc.	Phone Number:	(202)478-7137
DBA Name:		Fax Number:	(202)478-7101
Street:	1129 20th Street NW Suite 1000	E-Mail:	daniel.mah@ses.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036
Attention:	Daniel C.H. Mah		-

**Attachment to Grant
SES Americom, Inc.
IBFS File No. SAT-MOD-20110714-00126
Call Sign S2156**

The application of SES Americom, Inc. (SES Americom), IBFS File No. SAT-MOD-20110714-00126, to modify the authorization of its Ku-band space station, AMC-5 (Call Sign S2156), is GRANTED. Accordingly SES Americom is authorized to conduct Telemetry, Tracking, and Telecommand (TT&C) operations using center frequencies of 14.001 GHz (telecommand) and 11.701 and 11.702 GHz (telemetry) necessary to relocate AMC-5 from its current orbital position of 79.05° W.L. to the 79.10° W.L. orbital location and to maintain the AMC-5 space station at that location with an east-west station-keeping tolerance of +/-0.1 degree.¹ Other than the change in orbital location and station-keeping tolerance, the conditions contained in prior authorizations otherwise remain in effect.² All operations of the AMC-5 space station must be in accordance with the technical specifications set forth in its application, Federal Communication Commission (Commission) rules, and the additional conditions set forth below.

1. SES Americom is granted a waiver of Section 25.210(j) of the Commission's rules, 47 C.F.R. § 25.210. Section 25.210(j) requires geostationary space stations to be "be maintained within +/-0.05° of their assigned orbital longitude in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance." SES Americom proposes to operate AMC-5 at the 79.10° W.L. orbital location with an east-west station-keeping tolerance of +/-0.1 degrees. SES Americom states that AMC-5's +/- 0.1 degree stationkeeping volume will not overlap with any other spacecraft, and thus AMC-5's operations will not adversely affect the operations of other spacecraft. This waiver and the operations it permits shall terminate in the event that a satellite is launched into a location such that its station-keeping volume would overlap AMC-5's +/-0.1 degree station-keeping volume, but would not overlap AMC-5's +/-0.05 degree stationkeeping volume, unless SES Americom has successfully coordinated AMC-5's physical operations with those of the other spacecraft.

2. SES Americom must operate the AMC-5 space station in compliance with existing and future international coordination agreements applicable to SES Americom's operations at the 79.10° W.L. orbital location, including a coordination agreement with Argentina.

3. 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).

4. SES Americom has 30 days from the date of this grant to decline this authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.


5. This action is issue 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

¹ SES Americom requests authority for TT&C operations only at the 79.10° W.L. orbital location and does not seek to activate the Ku-band communications payload. Accordingly, the authority granted in this modification does include authority to operate the Ku-band communications payload aboard AMC-5 at 79.10° W.L.

² See IBFS File Nos. SAT-MOD-19980113-00002 (granted Oct. 28, 1998), SAT-MOD-20050609-00117 (granted Jul. 20, 2005), and SAT-MOD-20100706-00154 (granted Jan. 20, 2011).

Attachment to Grant
SES Americom, Inc.
IBFS File No. SAT-MOD-20110714-00126
Call Sign S2156

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.

 GRANTED* International Bureau *with conditions	File # <u>SAT-MOD-20110714-00126</u>
	Call Sign <u>S2156</u> Grant Date <u>09/14/11</u> (or other identifier)
	Term Dates <u>see attached</u> From <u>09/14/11</u> To: <u>conditions</u>
	Approved: <u><i>Stephen J. Duall</i></u> Stephen J. Duall Chief, Satellite Policy Branch

9-16. Name of Contact Representative

Name:	Karis Hastings	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

<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 checked="" 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 checked="" type="radio"/> b13. Amendment to a Pending Database Entry Application</p> <p><input checked="" 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 checked="" type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee</p> <p><input checked="" type="radio"/> Other (please explain):</p>	
<p>17d.</p> <p>Fee Classification BFY – Space Station Modification (Geostationary)</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: SATMOD2010070600154</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 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 style="text-align: right;"> <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 style="text-align: right;">SES 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 style="text-align: right;"> <input checked="" type="radio"/> Yes <input 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 style="text-align: right;"> <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;">SES 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: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></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: right;">Yes <input type="radio"/> No <input checked="" type="radio"/></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 of AMC-5, call sign S2156, to reassign the satellite to the 79.10 W.L. orbital location and authority to operate there with an east-west stationkeeping tolerance of +/-0.1 degrees.</p> </div> <p>SES 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

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46. Title of Person Signing
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

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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 Application of)	
)	
SES AMERICOM, INC.)	File No. SAT-STA-_____
)	Call Sign S2156
For Modification of the AMC-5 License to)	
Assign the Satellite to 79.10° W.L. with)	
+/- 0.1 Degree East-West Stationkeeping)	

APPLICATION OF SES AMERICOM, INC.

SES Americom, Inc. (“SES Americom”) hereby respectfully requests modification of the license for the AMC-5 Ku-band in-orbit spare satellite to reassign the spacecraft to 79.10° W.L. with an east-west stationkeeping tolerance of +/- 0.1 degrees. Authority is sought for telemetry, tracking and command (“TT&C”) operations only – SES Americom does not seek to activate the communications payload while the satellite is positioned at 79.10° W.L. Grant of the requested authority will preserve AMC-5’s fuel and extend the satellite’s operational life, facilitating the spacecraft’s availability to provide future services.

A completed FCC Form 312 is attached, and SES Americom incorporates by reference the technical information previously provided in support of AMC-5.¹ In addition, SES Americom is providing information relating to the proposed modification to the AMC-5 license in the attached Technical Appendix.

¹ See File Nos. SAT-MOD-20100706-00154; SAT-MOD-20050609-00117; & SAT-MOD-19980113-00002.

MODIFICATION

AMC-5 is a Ku-band only spacecraft launched in 1998, and the terms of its current license specify operation at 79.05° W.L. with an east-west stationkeeping tolerance of +/- 0.05 degrees.² In order to extend the fuel life of AMC-5, SES Americom seeks modification of the AMC-5 license to reassign the spacecraft to 79.10° W.L. and permit operations within a +/- 0.1 degree east-west stationkeeping volume. SES Americom has already implemented this change pursuant to a grant of Special Temporary Authority,³ and now seeks a modification of the AMC-5 license in order to retain the changed stationkeeping parameters.

As SES Americom explained in the AMC-5 STA Request, SES Americom also operates the AMC-2 C/Ku-band hybrid spacecraft at the nominal 79° W.L. orbital location, in the stationkeeping volume bounded by 78.90° W.L. and 79.00° W.L.⁴ SES Americom relies primarily on AMC-2 to provide Ku-band services at this orbital location, with AMC-5 available to provide occasional use or back-up capacity as needed.⁵

² See File No. SAT-MOD-20100706-00154, Call Sign S2156, grant-stamped Jan. 20, 2011, Attachment to Grant at ¶ 3. Thus, under the terms of its existing license, AMC-5's stationkeeping volume is bounded by 79.00° W.L. and 79.10° W.L. The AMC-5 satellite is currently in inclined orbit. See Letter of Karis A. Hastings, Counsel for SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, regarding AMC-5 (Call Sign S2156) dated June 16, 2010.

³ See Call Sign S2156, File No. SAT-STA-20110614-00108 ("AMC-5 STA Request"), grant-stamped June 29, 2011.

⁴ AMC-5 STA Request at 1-2. SES Americom also noted that it has proposed to relocate AMC-2 later this year to the nominal 5° E.L. orbital location and to operate it there pursuant to Swedish licensing authority. See File No. SAT-T/C-20110527-00100 ("AMC-2 5° E.L. Application").

⁵ As discussed in the AMC-2 5° E.L. Application, SES Americom is in the process of transitioning all customer traffic off of AMC-2 in preparation for its planned relocation. See *id.*, Narrative at 3.

SES Americom sought an expanded stationkeeping tolerance for AMC-5 to extend the satellite's fuel life. To avoid any overlap with the stationkeeping volume of AMC-2, SES Americom also proposed to shift the center of AMC-5's box slightly from 79.05 ° W.L. to 79.10° W.L.

Reassignment of AMC-5 to 79.10° W.L. +/- 0.1 degrees is consistent with Commission precedent and will not adversely affect other operators. The new stationkeeping volume does not overlap with that of AMC-2 or any other spacecraft. The proposed modification does not alter the end-of-life disposal plan for AMC-5, which has already been approved by the Commission.⁶

Furthermore, retaining the changed stationkeeping parameters will not cause harmful interference. SES Americom seeks authority to perform TT&C only at 79.10° W.L., not to provide communications services.⁷ AMC-5 TT&C will continue to be performed consistent with existing and future coordination agreements applicable to SES Americom's operations at the nominal 79° W.L. orbital location, including the coordination agreement addressing the Argentine Administration's ITU filings at 81° W.L.⁸

Thus, grant of the requested modification will serve the public interest. The modified stationkeeping parameters will prolong the operational life of AMC-5, extending the

⁶ See AMC-5 Modification Grant, Attachment to Grant at ¶¶ 5-6.

⁷ The AMC-5 TT&C frequencies are as follows:
Command: 14001 (vertical polarization; uplink)
Telemetry: 11701 and 11702 (horizontal polarization; downlink).

⁸ SES Americom notes that the satellite previously positioned at 81° W.L., Intelsat 3R, is being deorbited. See Letter of Susan H. Crandall, Assistant General Counsel, Intelsat Corporation, to Robert Nelson, Chief, Satellite Division dated June 28, 2011 (notifying the Commission that pursuant to authority granted in File No. SAT-STA-20110503-00083, Intelsat expected to begin end-of-life maneuvers for Intelsat 3R on July 6, 2011).

time during which the spacecraft will be available to provide service in response to future customer requirements.⁹ The operations of other authorized satellites will not be adversely affected.

WAIVER REQUEST

As it did in the AMC-5 STA Request, SES Americom seeks a limited waiver of Section 25.210(j) of the Commission's rules in connection with the requested AMC-5 modification. 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.¹⁰

Section 25.210(j) specifies that geostationary space stations "must be maintained within 0.05° of their assigned orbital longitude in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance." 47 C.F.R. § 25.210(j). The Commission has previously waived this rule based on a finding that allowing an increased stationkeeping volume would "not adversely affect the operations of other spacecraft, and would conserve fuel for future operations."¹¹

⁹ The AMC-5 license term extends to November 30, 2013, but until recently, SES Americom had anticipated deorbiting the satellite later this year. However, new calculations performed by Thales, the satellite's manufacturer, indicate that the satellite has sufficient fuel to continue to operate in inclined orbit through the end of the satellite's existing license term or even longer.

¹⁰ *PanAmSat Licensee Corp.*, 17 FCC Rcd 10483, 10492 (Sat. Div. 2002) (footnotes omitted).

¹¹ See, e.g., SES Americom, Inc. Application for Modification of Satcom SN-4 Fixed Satellite Space Station License, 20 FCC Rcd 11542, 11545 (Sat. Div. 2005).

The facts here fit squarely within this precedent. As discussed above, allowing AMC-5 to be maintained within an increased stationkeeping volume will not harm other operators. AMC-5's stationkeeping volume will not overlap with that of any other satellites. Furthermore, the proposed TT&C operations will not materially affect the interference environment. Allowing AMC-5 to be flown at 79.10° W.L. in an expanded east-west stationkeeping volume of +/-0.1 degrees will result in fuel savings for the spacecraft. This will prolong the time during which AMC-5 will be available to provide service in response to future customer requirements. Under these circumstances, grant of any necessary waiver of Section 25.210(j) will serve the public interest.

CONCLUSION

For the foregoing reasons, SES Americom seeks modification of the AMC-5 space station license to reassign the satellite to 79.10° W.L. and permit it to be maintained there with an east-west stationkeeping tolerance of +/- 0.1 degrees.

Respectfully submitted,

SES AMERICOM, INC.

By: /s/ Daniel C.H. Mah

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Daniel C. H. Mah
Regulatory Counsel
SES Americom, Inc.
Four Research Way
Princeton, NJ 08540

Dated: July 14, 2011

Technical Appendix

1. Introduction

This technical appendix is submitted in support of the application of SES Americom, Inc. ("SES Americom") for a modification of its license for the AMC-5 Ku-band spacecraft. SES Americom seeks reassignment of the spacecraft to 79.10° W.L. with an east-west stationkeeping tolerance of +/- 0.1 degrees. SES Americom proposes to operate only the satellite's TT&C payload at the 79.10° W.L. orbital location, not to provide communications services. SES Americom incorporates by reference herein the technical information it has already provided with respect to AMC-5,¹ and provides here technical information that is changing as a result of the proposed modification.

2. Gain Contours

SES Americom is not submitting new contour maps with this application. The proposed shift in orbital location from 79.05° W.L. to 79.10° W.L. will produce no visible change in the gain contours from the maps already on file.

3. Link Budgets and Interference Analysis

An interference analysis was submitted to the FCC in connection with the initial operation of AMC-5 at 79° W.L. demonstrating that operation of AMC-5 was compatible with adjacent satellites and with the Commission's two-degree spacing requirements.² The proposed reassignment of AMC-5 and use of TT&C frequencies to maintain the satellite at the new location will not cause any material change to the interference environment. Consistent with industry practice, TT&C operations are typically addressed with adjacent satellite licensees on a case-by-case basis considering the actual characteristics of the respective networks. Here, the reassignment moves AMC-5 slightly closer to 81° W.L., but as discussed in the narrative, that orbital location is being vacated as a result of the deorbit of Intelsat 3R.

Given that the proposed offset and expanded stationkeeping volume for AMC-5 will not result in any material change to the existing interference environment with respect to AMC-5 and current or future adjacent satellites, no link budget analysis is provided herein. SES Americom will perform TT&C for AMC-5 in conformance with existing and future coordination agreements applicable to the nominal 79° W.L. orbital location, including its coordination agreement with the Argentine Administration relating to operations at 81° W.L. In the unlikely event that any future concerns arise relating to AMC-5 at the proposed offset location, SES Americom will coordinate with the adjacent operators in order to arrive at a mutually satisfactory solution.

¹ See File Nos. SAT-MOD-20100706-00154; SAT-MOD-20050609-00117; SAT-MOD-19980113-00002.

² File No. SAT-MOD-19980113-00002, Attachment C, Interference Analysis for GE-5 Ku-Band Transponders.

4. Schedule S

As discussed above, the proposed modification of the AMC-5 license 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-5's operation. In similar cases involving requests for slight offsets from the nominal orbital position, the Satellite Division has not required the submission of a new Schedule S.³ 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 is already on file with the Commission.⁴ SES Americom incorporates that information by reference and provides below a few minor updates to its previous showing.

§25.114(d)(14)(i): Onstation operations as proposed require stationkeeping within a +/- 0.1 degree E-W control box.

§25.114(d)(14)(ii): The Commission has granted SES Americom a waiver of Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules in connection with the residual helium that will remain in the AMC-5 tanks at the end of the spacecraft's life.⁵

§25.114(d)(14)(iii): The instant application seeks authority for operation of AMC-5 at the 79.10° W.L. orbital location with a stationkeeping volume bounded by 79.0° W.L. and 79.2° W.L. There will be no overlap between the requested stationkeeping volume of AMC-5 and that of AMC-2, which will be positioned at 78.95° W.L. SES Americom is not aware of any other FCC- or non-FCC licensed spacecraft that are operational or planned to be deployed at 79° W.L. or to nearby orbital locations such that there would be an overlap with the requested stationkeeping volume of AMC-5.

SES uses the Space Data Center ("SDC") system from the Space Data Association to monitor the risk of close approach of its satellites with other objects. Any close encounters (separation of less than 10 km) are flagged and investigated in more detail. If required, avoidance maneuvers are performed to eliminate the possibility of collisions.

³ 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.).

⁴ See File No. SAT-MOD-20100706-00154, Technical Appendix, Section 5.

⁵ See File No. SAT-MOD-20100706-00154, Call Sign S2156, grant-stamped Jan. 20, 2011, Attachment to Grant at ¶ 4.

During any relocation, the moving spacecraft is maneuvered such that it is at least 30 km away from the synchronous radius at all times. In most cases, much larger deviation from the synchronous radius is used. In addition, the SDC system is used to ensure no close encounter occurs during the move. When de-orbit of a spacecraft is required, the initial phase is treated as a satellite move, and the same precautions are used to ensure collision avoidance.

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: July 14, 2011