

**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.

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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