

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

In the Matter of)
)
SES AMERICOM, INC.)
) File No. SAT-MOD-_____
Application for Modification of AMC-6 Fixed-) Call Sign S2347
Satellite Space Station License)

APPLICATION OF SES AMERICOM, INC.

SES Americom, Inc. (“SES”) hereby respectfully requests modification of its license for the AMC-6 C/Ku-band fixed-satellite space station to reassign the spacecraft to 85.0° W.L. (“SES Modification Application”). Specifically, SES seeks authority to: (1) drift AMC-6 from its current position at 67.0° W.L. to 85.0° W.L. and maintain it at that location in inclined orbit using certain C-band and conventional Ku-band frequencies for Telemetry, Tracking and Command (“TT&C”);¹ and (2) operate AMC-6 in the conventional Ku-band and extended Ku-band² frequencies at 85.0° W.L. AMC-6 operations at 85° W.L. in the conventional Ku-band will be pursuant to an agreement with EchoStar Satellite Operating Corporation (“EchoStar”), which holds the license for the Ku-band payload of the AMC-16 Ku/Ka-band spacecraft located at 85° W.L.³ Reassignment of AMC-6 will serve the public

¹ The AMC-6 TT&C frequencies and nominal polarizations are as follows:
Command: 6423.5 MHz (horizontal polarization; uplink)
Telemetry: 3700.5 MHz (horizontal polarization; downlink),
4199.5 MHz (vertical polarization; downlink), and
11702.0 MHz (horizontal polarization; downlink)
12198.0 MHz (vertical polarization; downlink).

² Operations in the extended Ku-band will be conducted under an ITU network filing held by the Netherlands Administration.

³ See File No. SAT-ASG-20141020-00111.

interest by allowing SES to use AMC-6 to supplement Ku-band service provided by the AMC-2 and AMC-16 satellites, specifically to serve customers in the northern latitudes of North America. AMC-6 will also add capacity in the extended Ku-band.

A completed Form 312 is attached, and SES incorporates by reference the technical information previously provided in support of AMC-6.⁴ In addition, SES is providing here technical information relating to the proposed modification to the AMC-6 license on Schedule S and in narrative form pursuant to Section 25.114 of the Commission's Rules.

SES also asks that the Commission designate the SES Modification Application proceeding as permit-but-disclose for purposes of the *ex parte* rules. Section 1.1200(a) of the Commission's rules confers discretion on the Commission and its staff to modify the *ex parte* status of a proceeding based on a finding that such modification is in the public interest.⁵ Grant of permit-but-disclose status for the SES Modification Application will facilitate communication between the Commission, SES and any other parties regarding the SES Modification Application, allowing the Commission to develop a full and complete record. As a result, permit-but-disclose designation will enhance the Commission's ability to process and act on the SES Modification Application.

⁴ The most recent technical information regarding AMC-6 is found in File No. SAT-MOD-20050819-00163. This application also incorporated by reference the technical information from File Nos. SAT-LOA-19971222-00230, SAT-AMD-20000510-00089 and the updated orbital debris mitigation plan submitted in File No. SAT-MOD-20150820-00059.

⁵ 47 C.F.R. § 1.1200(a).

MODIFICATION

Re-assignment to 85.0° W.L.: AMC-6 is a U.S.-licensed hybrid C/Ku-band satellite that is assigned to 67° W.L. with a license term that expires on November 22, 2023.⁶ At that position, AMC-6 is operating under the ITU satellite network filings of the Colombian Administration. SES's affiliate, New Skies Satellites B.V. ("NSS"), has authority from the Colombian Administration to launch and operate its SES-10 satellite at 67° W.L.⁷ SES-10 is scheduled to be launched at the end of March 2017 and is expected to be fully operational by the beginning of May 2017. At that time, AMC-6 will become available for relocation.

SES has entered into an agreement with EchoStar to reposition AMC-6 to 85° W.L. in order to supplement the Ku-band capacity of AMC-2 and AMC-16. Reassignment of AMC-6 to 85° W.L. will also allow extended Ku-band service from that location. No customers of AMC-6 will be adversely affected, as they will be transferred to SES-10 in advance of the planned relocation.

Grant of the requested authority to relocate and operate AMC-6 will serve the public interest and is consistent with Commission precedent. The Commission has repeatedly observed that its policy is to allow "satellite operators to rearrange satellites in their fleet to

⁶ See File No. SAT-MOD-20161014-00098, license reissued as modified Jan. 15, 2017. The application to position AMC-6 at 67° W.L. was filed as a fleet management notice under Section 25.118(e). Under that rule, SES was authorized to relocate the satellite effective 30 days after filing, *i.e.*, November 14, 2016.

⁷ See *New Skies Satellites B.V. Market Access Application*, File No. SAT-PPL-20160117-00005 ("SES-10 Petition"), granted on June 23, 2016 ("SES-10 Grant"). The grant was based on SES-10 operating at 67.0° W.L., but NSS has filed a modification of its authority to operate the satellite at 66.9° W.L. pursuant to the Commission's expedited process set out in Section 25.117(h)(1). *New Skies Satellites B.V. Modification*, File No. SAT-MPL-20170108-00002, (Call Sign S2950), filed Jan. 8, 2017.

reflect business and customer considerations where no public interest factors are adversely affected.”⁸ As the International Bureau has explained:

the Commission attempts, when possible, to leave spacecraft design decisions to the space station licensee because the licensee is in a better position to determine how to tailor its system to meet the particular needs of its customers. Consequently the Commission will generally grant a licensee’s request to modify its system, provided there are no compelling countervailing public interest considerations.⁹

Here, the proposed change will allow SES to make efficient use of AMC-6 in order to expand conventional Ku-band capacity and add extended Ku-band capacity at the nominal 85° W.L. orbital location. Because SES-10 will assume the customers currently carried on AMC-6 at 67° W.L., the relocation of AMC-6 will not have any impact on existing services.

Reassignment of AMC-6 to 85.0° W.L. degrees will not adversely affect other operators. The only satellites positioned at the nominal 85° W.L. orbital location are operated by SES, and station keeping can be maintained through internal satellite management. SES will operate only the TT&C frequencies of AMC-6 during the drift and will follow standard industry practices for coordination of TT&C transmissions during the relocation process. The Technical Appendix certifies that the AMC-6 network is compliant with Commission rules for operation in a two-degree spacing environment and is compatible with co-frequency satellites adjacent to the nominal 85° W.L. orbital location.

⁸ *SES Americom, Inc.*, Order and Authorization, DA 06-757 (IB rel. Apr. 7, 2006) at 4, ¶ 8, citing *Amendment of the Commission’s Space Station Licensing Rules and Policies*, Second Report and Order, 18 FCC Rcd 12507, 12509, ¶ 7 (2003).

⁹ *AMSC Subsidiary Corp.*, Order and Authorization, DA 98-493, 13 FCC Rcd 12316 (IB 1998) (“*AMSC Modification Order*”) at 12318, ¶ 8 (footnote omitted).

CONCLUSION

For the foregoing reasons, SES seeks modification of the AMC-6 license to reassign the spacecraft to 85.0° W.L. for operations in the conventional Ku- and extended Ku-band frequencies, as described in the attached materials. SES also requests the SES Modification Application proceeding be designated permit-but-disclose for purposes of the *ex parte* rules.

Respectfully submitted,

SES AMERICOM, INC.

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TECHNICAL APPENDIX

AMC-6 AT 85.0° W.L.

1.0 Overall Description (§25.114(d)(1))

This technical appendix is submitted in support of the modification application of SES Americom, Inc. (“SES”) seeking authority to relocate AMC-6 to 85.0° W.L. SES incorporates by reference the technical information it has already provided with respect to AMC-6,¹ and provides here technical information relating to operation of AMC-6 at 85.0° W.L. consistent with the proposed modification.

AMC-6 is equipped with twenty-four 36 MHz conventional Ku-band transponders, four 72 MHz extended Ku-band transponders and twenty-four 36 MHz conventional C-band transponders. The conventional and extended Ku-band transponders will provide coverage of North America. SES has no current plans to provide C-band communications service at 85.0° W.L. using AMC-6. The Telemetry, Tracking and Command (“TT&C”) capabilities will be provided in the Ku-band and in limited C-band frequencies as described in previous applications. The interconnectivity of the AMC-6 uplink and downlink transponders and its detailed frequency plan is described in previous applications.

2.0 Schedule S (§25.114(c))

The Schedule S database is included with this filing. Pursuant to Section 25.114(c)(4)(vi)(A), the gxt diagram for the global telecommand receive beam (“CMD”) is not included because for this beam the contour at 8 dB below peak falls entirely beyond the edge of the visible Earth.

¹ The most recent technical information regarding AMC-6 is found in File No. SAT-MOD-20050819-00163. This application also incorporated by reference the technical information from File Nos. SAT-LOA-19971222-00230 & SAT-AMD-20000510-00089 and the updated orbital debris mitigation plan submitted in File No. SAT-MOD-20150820-00059.

3.0 TT&C frequencies and beams

The telemetry and command subsystem consists of redundant receivers and transmitters which are able to operate through either an omnidirectional antenna system or through the communications antennas. AMC-6 will use the communication antennas (“CTH” and “CTV”) for transmitting telemetry carriers in C-band, and the global horn antenna for receiving the C-band telecommand carrier (“GBLRH”) with a horizontal polarization while on-station. The communication antennas (“NATH” and “NATV”) will be used for transmitting telemetry carriers in Ku-band. All of these carriers are described in the Schedule S.

4.0 Certification with respect to two degree spacing levels (§25.140(a))

SES certifies that the AMC-6 downlink EIRP density will not exceed 8 dBW/4kHz for analog transmissions in the C-band nor 14 dBW/4kHz in the Ku-band unless higher levels are coordinated with the operators of authorized co-frequency space stations at assigned locations within six degrees of 85° W.L. SES also certifies that the associated uplink EIRP density levels in the C-band will not exceed the envelopes in §25.218 or §25.221(a)(1) unless appropriately coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of 85.0° W.L. In the Ku-band SES has completed coordination with Intelsat, ARSAT and Novavision, and will operate in accordance with the coordinated levels.

5.0 Maximum Theoretical Operation Levels

AMC-6 will be operated consistently with coordination agreements with adjacent satellites. In any case, in the conventional and extended Ku-bands, the downlink EIRP density of the AMC-6 digital carriers will not exceed -20.5 dBW/Hz, and the input power density of the uplink digital carriers of earth stations operating with AMC-6 will not exceed -46 dBW/Hz. In the 3700-4200 MHz band, the downlink EIRP density of the AMC-6 digital carriers will not exceed -30.0

dBW/Hz; and in the 5925-6425 MHz band, the input power density of the uplink digital carriers of earth stations operating with AMC-6 will not exceed -32.0 dBW/Hz.

6.0 Mitigation of Orbital Debris (§25.114(d)(14))

The information required under Section 25.114(d)(14) of the Commission's Rules is already on file with the Commission and is incorporated by reference herein.² SES proposes to move AMC-6 to 85.0° W.L. and to operate it there in inclined orbit with an east-west station keeping tolerance of +/- 0.05 degrees.

SES will operate AMC-6 in collocation with AMC-16, which operates at 85.0°W.L. with an east/west station keeping tolerance of ±0.05 degrees. AMC-2 is operated at 84.85° W.L. with a station-keeping box of +/-0.1. As such, the station-keeping boxes of AMC-6 and AMC-16 will not overlap with AMC-2's. Sirius XM operates the XM-3 satellite at 85.15° W, which is also outside of the station-keeping box of AMC-6. SES is not aware of any other satellites planned to be at or near the nominal 85° W.L. orbital location.

² See File No. SAT-MOD-20050819-00163, Technical Appendix, Section 6, as updated in File No. SAT-MOD-20150820-00059, Attachment A.

DECLARATION

I, Giadira V. León, hereby certify under penalty of perjury that I am the technically qualified person responsible for 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/ Giadira V. León

Giadira V. León
Manager, Spectrum Development
SES

Dated: March 16, 2017