

TECHNICAL APPENDIX

AMC-6 RELOCATION TO 139.0° W.L.

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

This technical appendix is submitted in support of the application of SES Americom, Inc. (“SES”) to relocate the C/Ku-band AMC-6 satellite from its current orbital position of 83.0° W.L. to 139.0° W.L., where it will operate only in the C-band frequencies. SES incorporates by reference the technical information already on file with respect to AMC-6¹ and provides here technical information relating to operation of AMC-6 at 139.0° W.L. as proposed. AMC-6 is equipped with twenty-four 36 MHz C-band transponders and has two C-band beams. At 139.0° W.L., the spacecraft’s C-band transponders will provide coverage of North America, the Caribbean, Central America, and parts of the Pacific Ocean. SES seeks limited flexibility to adjust the coverage in response to customer demand, as discussed below.

2.0 Schedule S (§25.114(c))

The Schedule S database is included with this filing. Consistent with §25.114(c)(4)(vi)(A), the gain characteristics for the global horn antenna (“CMD”) and (“CTM”) are not provided in a GIMS-readable format with the Schedule S because the contour at 8 dB below peak of these beams falls entirely beyond the visible Earth.

The contour information submitted with the Schedule S describes the nominal coverage area for the satellite, but SES seeks limited flexibility to alter the coverage in order to address changing customer requirements. Specifically, SES seeks authority to repoint the C-band beams within the

¹ The most recent technical information regarding AMC-6 is found in File No. SAT-MOD-20170628-00102. This application also incorporates by reference the updated orbital debris mitigation plan submitted in File No. SAT-MOD-20150820-00059.

envelope defined by Figure 1, which provides a composite isoline of the 8 dB below peak contour of all prospective pointings of the C-band beams.

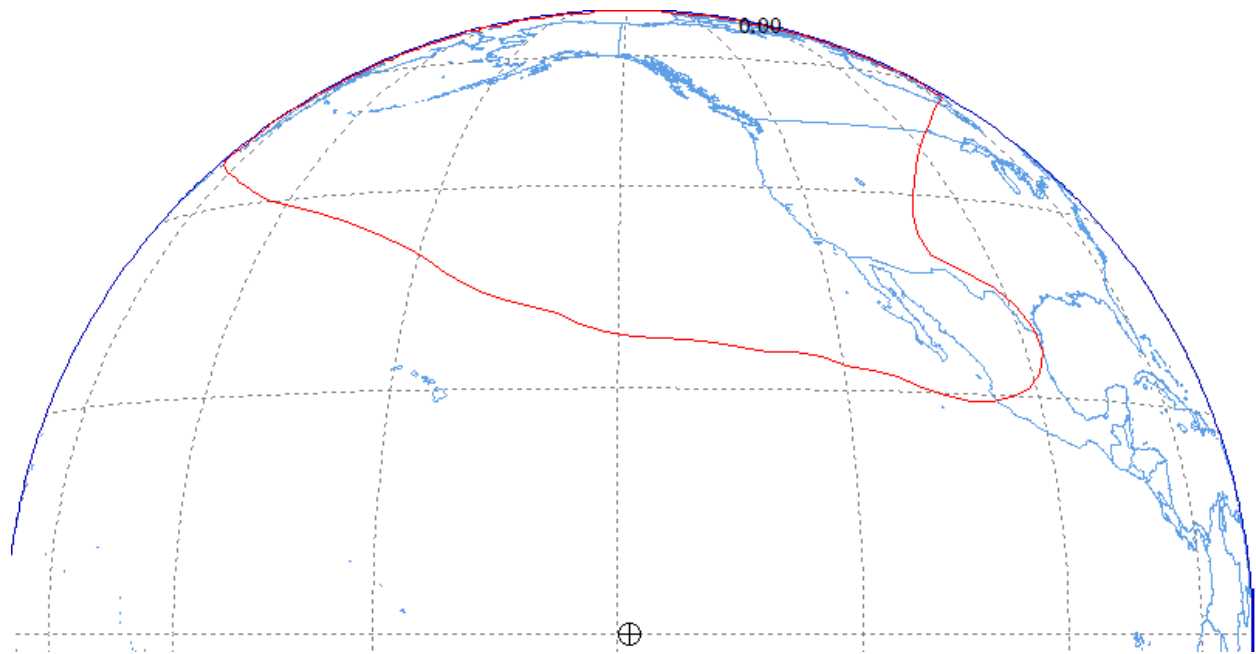


Figure 1

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

SES certifies that the AMC-6 downlink EIRP density will not exceed 3 dBW/4kHz for digital transmissions or 8 dBW/4kHz for analog transmissions in the C-band unless higher levels are coordinated with the operators of authorized co-frequency space stations at assigned locations within six degrees of 139.0° W.L. and except as provided in §25.140(d). SES also certifies that the associated uplink EIRP density levels in the C-band will not exceed the applicable envelopes in §25.218 unless appropriately coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of 139° W.L. and except as provided in §25.140(d).

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

The information required under §25.114(d)(14) of the Commission's Rules is already on file with the Commission and is incorporated by reference herein.² Updates to the information on file are provided below.

On its arrival at 139° W.L. AMC-6 will temporarily be collocated with SES's AMC-18 satellite during traffic transfer, after which SES plans to relocate AMC-18 to 83° W.L.³ SES is not aware of any other FCC- or non-FCC licensed spacecraft that are operational or planned to be deployed at 139° W.L. or to nearby orbital locations such that there would be an overlap with the requested station-keeping volume of AMC-6.

² See File No. SAT-MOD-20150820-00059, Attachment A.

³ Pursuant to a grant of special temporary authority (File No. SAT-STA-20200319-00027), the AMC-8/Aurora III satellite is being relocated from 139° W.L. to 135° W.L. prior to the planned arrival of AMC-6 at 139° W.L.

DECLARATION

I, Ryan Henry, 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/ *Ryan Henry*

Ryan Henry
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Development
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Dated: June 5, 2020