ENGINEERING STATEMENT

AMAZONAS-2 AT 72.0° W.L

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

This technical appendix is submitted in support of the applications of SES Americom Inc ("SES") for authority to operate the Amazonas-2 satellite at 72.0° W.L. with an east-west station-keeping of +/- 0.1 degrees. The satellite is currently in inclined orbit and will continue operating in inclined orbit at 72.0° W.L. Inclination upon arrival at 72.0° W.L. in June 2026 will be approximately 1.76° and is expected to grow to about 4.17° at its currently expected end of life at the end of 2028.

Amazonas-2 is capable of operating in the Ku- and C-band frequencies listed below.

Satellite Capabilities	
Direction	**Frequency**
Uplink	12.75-13.25 GHz[1]
	13.75-14.5 GHz
	6725-7025 MHz[2]
Downlink	10.7-11.45 GHz[3]
	11.7-12.2 GHz
	4500-4800 MHz[4]

SES is seeking authorization to operate on the following specific frequencies:

Frequencies for which Commission authority is sought	10.95-11.2 GHz (space-to-Earth) 11.2-11.45 GHz (space-to-Earth) 11.7-12.2 GHz (space-to-Earth) 13.0-13.25 GHz (Earth-to-space) 13.75-14.5 GHz (Earth-to-space) Telemetry, Tracking, and Command ("TT&C") center frequencies: 11.703 GHz and 12.19825 GHz (space-to-Earth) 13.997 GHz and 14.496 GHz (Earth-to-space)

While the full technical capabilities of the satellite, including all frequency bands and beams, are reflected in the Schedule S, this application seeks authority only for the operation of the specified frequencies on the following beams – N2RH, N3RV, N3RH, N4RV, N4RH, N2TV, K2TH, K3TV, N4TV, N4TH, K5TV and K5TH – with coverage over North

[1] SES is not seeking authority to operate in 12.75-13.0 GHz.
[2] SES is not seeking authority to operate in 6725-7025 MHz.
[3] SES is not seeking authority to operate in 10.7-10.95 GHz.
[4] SES is not seeking authority to operate in 4500-4800 MHz.

America, West Atlantic Ocean, and the Caribbean in the Ku-band using linear polarization (LH, LV). The beams and frequencies for which Commission authority is not sought will not be operated at 72.0° W.L.

2.0 Telemetry, Telecommand and Control Facilities

The TT&C beams TCV and TMV have gain contours that vary by less than 8 dB across the surface of the Earth, and accordingly the gain at 8 dB below the peak falls beyond the edge of the Earth. Therefore, pursuant to Section 25.114(c)(4)(vi)(A) of the Commission's rules, contours for these beams are not required to be provided, and the associated GXT files have not been included in Schedule S.

The TT&C carrier center frequencies and bandwidths for nominal operations are provided in Schedule S.

3.0 Interference Analysis and Certifications: §25.140

SES certifies that the Amazonas-2 downlink EIRP densities in the conventional and extended Ku-bands will not exceed 14 dBW/4kHz for digital transmissions or 17 dBW/4kHz for analog transmissions, unless higher levels are coordinated with the operators of authorized co-frequency space stations at assigned locations within six degrees of 72.0° W.L., and except under the provisions of §25.140(a)(3)(i) and notified as described in §25.140(d).

Furthermore, SES certifies that the levels of the uplink emissions in the Ku-band will not exceed the limits set in §25.218 unless appropriately coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of 72.0° W.L and except as provided in §25.140 (a)(3)(i) and notified as described in §25.140(d).

4.0 Schedule S: §25.114(c)

Schedule S includes GXT files depicting the nominal contours of all beams following the proposed relocation, but SES also seeks limited flexibility to depart from the nominal pointing of the beams in order to address changing customer requirements. Specifically, SES seeks authority to repoint the Ku-band beams for which it seeks authority (see Section 1.0 above) within the envelope defined by the red line in Figure 1, which provides a composite isoline of the 8 dB below peak contour of all prospective pointings of the beam.

Figure 1.

5.0 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.[5] SES hereby submits the following supplemental or changed information regarding orbital debris mitigation.

- At the end of the mission, the spacecraft will be disposed of by moving to a target minimum altitude of 300 kilometers above the geostationary arc. This exceeds the minimum perigee disposal altitude required by Section 25.283(a) the Commission's rules of 275.4 kilometers above the geostationary arc.

- 13.2 kilograms of propellant have been reserved for this purpose.[6]

The Amazonas-2 satellite's subsystems and solar panels are functioning, and there are no single points of failure that would affect the ability to de-orbit the satellite. In addition, the satellite's TT&C functions and the payloads for which authority has been requested are operational.

[5] See File Number SAT-APL-20101209-00257.

[6] The currently expected end-of-life of Amazonas-2 satellites is end of 2028.

DECLARATION

I, Yuan Yan Tay, 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/ Yuan Yan Tay
Engineer, Spectrum Management and Development
SES Americom, Inc.

Dated: May 7, 2026