

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

In the Matter of Application by	)	
	)	
SES AMERICOM, INC.	)	Call Signs E202170, E000289, and
	)	E000696
For Special Temporary Authority to	)	
Communicate with SES-21 to Perform	)	
In-Orbit Testing at 142.8° W.L.	)	

Expedited Action Requested

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

SES Americom, Inc. (“SES”), respectfully requests a 30-day special temporary authority (“STA”) to use its C-band earth stations with call signs E202170, E000289, and E000696 for a period of up to 30 days to perform in-orbit testing (“IOT”) at 142.8° W.L. (+/- 0.1 degrees). SES launched the SES-21 satellite on October 4, 2022 and will begin conducting IOT on November 3, 2022. SES, therefore, requests that the STA period begin on November 1, 2022. A full description of the SES-21 satellite can be found in the application.¹ SES seeks expedited action on this STA request to accommodate the scheduled IOT testing that will begin on November 3, 2022.

Grant of STAs Will Serve the Public Interest. Grant of SES’s request to test SES-21 at 142.8° W.L. is in the public interest. As discussed in the SES-21 Application, by

¹ *SES Americom, Inc.*, Call Sign S3099, File No. SAT-RPL-20210812-00102 (“SES-21 Application”), granted March 14, 2022 (“SES-21 License”).

testing SES-21 at this location, SES will minimize the risk of interference and be able to ensure that SES-21 is fully operational before the satellite commences providing commercial services.²

No Harmful Interference to Other Spacecraft. Transmissions associated with IOT of SES-21 will not cause harmful interference to the operations of any other spacecraft. Except for SES's AMC-6 spacecraft, there are no satellites within +/- 6 degrees of 142.8° W.L. operating in the C-band – the closest non-SES C-band satellite to 142.8° W.L. is at 133° W.L. SES will manage the operations of its satellites to prevent interference.

No Harmful Interference to C-band Terrestrial Services. The C-band earth stations to be used for SES-21 in-orbit testing have been coordinated to communicate with satellites in an arc that includes 142.8° W.L. The earth stations will comply with the coordinated and authorized power levels specified in their respective licenses, except in the case of certain tests involving high-powered continuous wave (“CW”) transmissions for a short duration of time lasting about 20 minutes each day of testing.

In any event, as with all operations under special temporary authority, SES will conduct all IOT on a non-harmful interference basis and will cease transmissions promptly in the event SES is notified of any harmful interference resulting from its operations.

Protective Conditions. SES seeks authority to communicate with SES-21 for purposes of C-band IOT at 142.8° W.L. subject to the following (or similar) conditions:

(a) SES will coordinate its test operations with all potentially affected operating satellite networks.

(c) No harmful interference will be caused to any lawfully operating satellite network or radio communication system, and SES's operations will cease immediately upon notification of harmful interference. Further, SES shall immediately notify the Commission in writing that it has received such a notification.

² See *id.*, Narrative at 2.

(d) SES will accept interference from any lawfully operating satellite network or radio communication system.

(e) Testing authority is limited to the conventional C-band frequencies at the 142.8° W.L. orbital location.

(f) Communications with the SES-21 space station at 142.8° W.L. are limited to in-orbit testing and shall not include any provision of commercial services.

(g) The authorization is subject to change in any of its terms or cancellation in its entirety at any time upon reasonable notice, but without hearing, if in the opinion of the Commission, circumstances require.

(h) The 24/7 point of contact for SES during IOT and drift maneuvers is Mike Pritchard, +1 609 987 4377, mike.pritchard@ses.com.

SES hereby certifies that no party to this application is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

For the foregoing reasons, SES respectfully requests an STA to communicate with SES-21 for a period of up to 30 days, beginning on November 1, 2022, in order to perform in-orbit testing as described herein. Grant of the requested authority will permit testing of the spacecraft prior to commercial operation.

Respectfully submitted,

SES AMERICOM, INC.

By: /s/ Kelsie Rutherford

Kelsie Rutherford
Regulatory Counsel
SES Americom, Inc.

Dated: October 14, 2022

ATTACHMENT 1

This attachment provides information in support of SES's request for earth station special temporary authority in connection with the proposed IOT of the SES-21 spacecraft at 142.8° W.L. The proposed IOT of SES-21 will involve verifying the performance characteristics of the C-band transponders and antenna patterns and will utilize in some cases saturating CW carriers in those bands. The IOT will include the following tests: satellite power amplifier transfer characteristics; satellite transponder characteristics; antenna mapping; and EIRP and SFD, amplitude linearity, group delay amplitude response, polarization isolation, and attenuator checks.

The transmissions for IOT will conform to the licenses of the relevant earth stations and the Commission's technical rules with one exception. The use of a CW carrier, using the N0N emission designator, during C-band IOT will involve earth station transmissions with a maximum EIRP density per carrier of up to 85 dBW and will result in satellite emissions in the 4000-4200 MHz frequency band that exceed the Commission's PFD limits on the earth's surface in Section 25.208(a). Transmit frequencies using the 85 dBW N0N carrier will be in the 6225-6425 MHz. However, the duration of the test involving CW carriers is very short (about 20 minutes per day) and SES will cease transmissions in the event of any report of harmful interference.