

**SES Government Solutions, Inc. (“SES-GS”)
Application for Experimental Special Temporary Authority**

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

SES-GS Representative and Stop Buzzer Contact:

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(2) Description of why an STA is needed.

SES Government Solutions, Inc. (“SES-GS”), a wholly-owned subsidiary of SES S.A. and an affiliate of O3b Limited (“O3b”), provides satellite solutions to U.S. government customers to meet mission critical needs. SES-GS seeks an experimental special temporary authority (“STA”) in order to test and demonstrate a terminal communicating with the O3b Ka-band non-geostationary orbit (“NGSO”) satellite system.²

Specifically, SES-GS requests STA to perform testing and demonstration of a 20.5 inch General Dynamics model M-20 antenna with the O3b network to assess the antenna’s suitability to support U.S. armed forces deployed around the world. SES-GS has been authorized under call sign WR9XXL to test and demonstrate this antenna at three locations³ and seeks authority for a new site in Bristow, VA with the same parameters specified in the WR9XXL STA. The antenna will communicate with O3b’s Ka-band NGSO satellite constellation using spectrum in which NGSO operations have sole primary status, transmitting in the 28.6-29.1 GHz frequencies and receiving in the 18.8-19.3 GHz frequencies.

¹ Given the ongoing COVID-19 pandemic, SES-GS requests that all correspondence be sent electronically, as physical mail to this address may not be checked regularly.

² The FCC has granted market access to the current O3b 20 satellite constellation and authorized the expansion of the constellation to up to 42 satellites. See *O3b Limited*, Order and Declaratory Ruling, 33 FCC Rcd 5508 (2018) (“O3b Market Access Grant”).

³ See *SES Government Solutions, Inc.*, Call Sign WR9XXL, File No. 0493-EX-ST-2021 (the “WR9XXL STA”).

(3) Time and Date of Proposed Operation

SES-GS requests expedited processing to allow testing to begin by September 16, 2021. The timing is driven by the need to support U.S. armed forces around the world. The terminal will be used to upload and download files and data at higher speeds and lower latencies than previously possible. With this type of capability, the men and women in our armed forces will be better connected, providing a higher probability of mission success as well as morale, welfare and recreation connectivity if needed. SES-GS is seeking to expedite the testing and demonstration process in order to speed the delivery of this valuable service to armed services personnel.

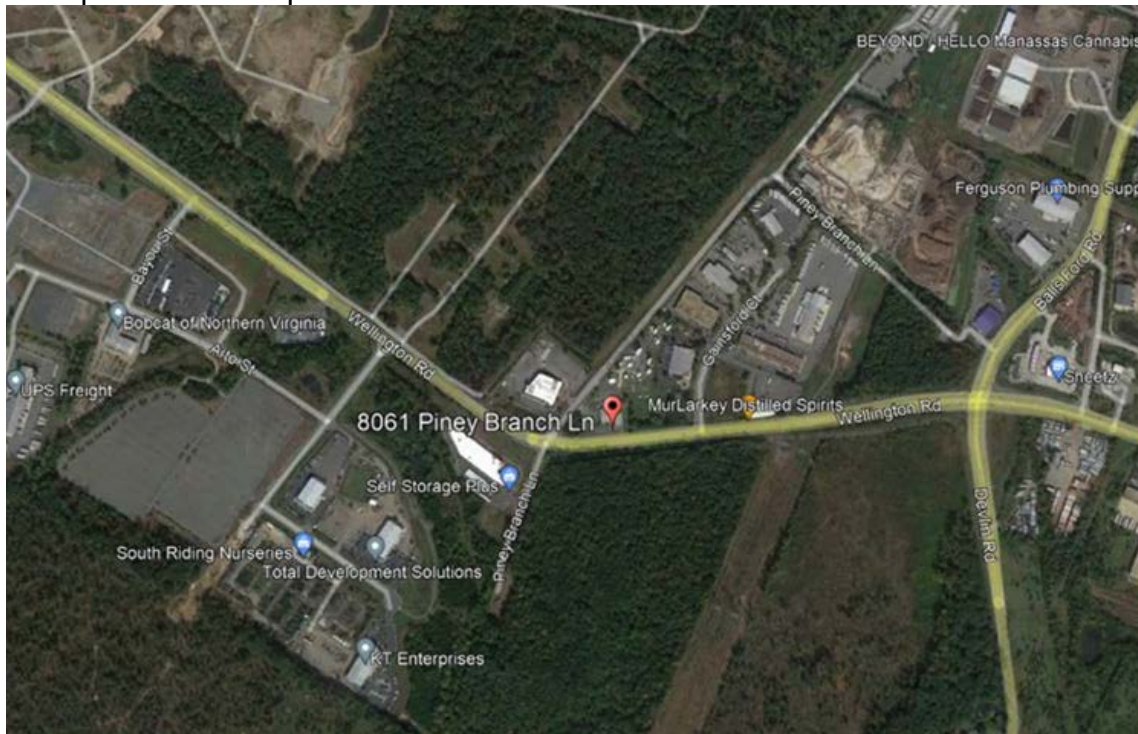
(4) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable).

The transmitting antenna will operate as a fixed satellite earth station.

(5) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation.

SES-GS will operate the terminal in fixed mode at and around the Washington Media Port (“WMP”) at 8061 Piney Branch Lane, Bristow, VA. During testing or demonstration the antenna will be positioned within a 0.5-mile (0.8 km) radius of the following coordinates: 38° 46’ 59” N.L.; 77° 34’ 27” W.L.

A map of the site is provided below.



(6) Transmit equipment to be used, including name of manufacturer, model, and number of units.

General Dynamics Model M-20, 1 unit.

(7) Maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

The maximum transmitted EIRP will be 53.5 dBW. The transmitted power is 18 Watts. The peak ERP is 135030 Watts.

For all operations, SES-GS will comply with the radiofrequency radiation exposure limits in 47 C.F.R. § 1.1310 and apply the measures recommended in the FCC's OET Bulletin 65 to ensure compliance.

(8) Emission Designator

50M0G7D

(9) Overall height of antenna of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The antenna's overall height above ground level is less than 1 meter.

(10) Directional Antenna Characteristics

Width of the antenna beam in degrees at the half-power point	1.3-1.4 degrees
Orientation of the antenna in the horizontal plane	Azimuth sweep range is from 205.7 degrees to 167.6 degrees
Orientation of the antenna in the vertical plane	Elevation will vary from 25 degrees to 28.7 degrees across the pass

Antenna patterns were provided in Annex 1 of the WR9XXL STA request and are incorporated by reference herein.