Inmarsat Inc.
Request for Special Temporary Authority
Exhibit A

Description of STA Request

Inmarsat Inc. ("Inmarsat") hereby requests special temporary authority ("STA") to conduct ground station testing of equipment at Comsat's Southbury, Connecticut, earth station facility (the "Southbury Gateway") for a thirty-day period commencing September 20, 2022.[1] Testing will be conducted in accordance with the attached plan. Inmarsat is in the process of submitting an earth station application to utilize the 13.2-meter antenna at the Southbury Gateway to provide TT&C and feeder link services for Inmarsat satellite Inmarsat 6-F2 using frequencies in the Ka-band, 27.5-30.0 GHz (Earth-to-space) and 17.7-17.8 and 17.9-20.2 GHz (space-to-Earth). That space station is licensed by the United Kingdom and is expected to be launched in 2023 and operate initially at the 28º W.L. orbital location. Inmarsat will seek United States market access for the Inmarsat 6-F2 space station through an earth station application involving the Southbury Gateway.

By this application, Inmarsat seeks authority to test the Southbury Gateway in advance of the launch of Inmarsat 6-F2 space station. Inmarsat currently operates a technically identical space station, Inmarsat 6-F1, which is also licensed by the United Kingdom, at the 28º W.L. orbital location. That satellite was launched last year and is undergoing initial testing with earth stations located outside the United States. Inmarsat 6-F1 will migrate to its planned orbital location over the Indian Ocean by the end of the year, where it will commence service, and accordingly, Inmarsat requests expedited treatment of this application.

To be clear, Inmarsat does not seek authority to provide commercial service to the United States through Inmarsat 6-F1, and similarly, Inmarsat does not seek a grant of market access for the satellite Inmarsat 6-F1 under this application, except as discussed above with respect to the testing of the Southbury Gateway.

Inmarsat has completed the Part 101 coordination procedure as indicated by the attached coordination reports, which have been timely renewed as required by Section 101.103(d)(2)(xi) of the Commission's Rules. Inmarsat will coordinate its STA operations with the U.S. federal government under footnote US334 of the United States Table of Frequency Allocations. Inmarsat understands and accepts that operation under the STA would be on a non-interference basis.[2]

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[1] The Southbury Gateway consists of one 13.2-meter antenna. The antenna coordinates, which are also listed on the STA application form, are latitude 41° 27' 6.7" N and longitude 73° 17' 23.6" W. There are no airports within 5 miles/8 kilometers of the site, so the structure does not require registration with the FAA.

[2] Inmarsat could find no licensed or authorized, co-frequency space stations between 26° W.L. and 30° W.L. in the IBFS database. Inmarsat commits to coordinate its operations with other parties to ensure no harmful interference is caused.

The following stop buzzer contacts for the Southbury Gateway are available 24/7:

- Ananda Mishra, Manager, Inmarsat Paumalu Satellite Access Station
  - +1 808 638-5805
  - +1 808 469-7108
  - ananda.mishra@inmarsat.com
- Inmarsat Network Operations Centre/London
  - +44 20 7728 1616
  - +44 78 4960 7722
  - noc.controllers@inmarsat.com

Pursuant to Section 25.137 of the Commission's rules, the same technical information required by Section 25.114 for U.S.-licensed space station, and certain legal information, must be submitted by earth station applicants "requesting authority to operate with a non-U.S. licensed space station to serve the United States…"[3]. Inmarsat seeks authority to conduct testing of the Southbury Gateway with the Inmarsat 6-F1 satellite to ensure compatibility with Inmarsat's forthcoming technically identical satellite, Inmarsat 6-F2. Because Inmarsat will not provide commercial service to the United States through the Inmarsat 6-F1 satellite under this application, Section 25.137 should not apply.[4]

To the extent the Commission determines, however, that Inmarsat's request for authority to provide testing on a special temporary basis is a request to serve the United States with a non-U.S.-licensed satellite, Inmarsat requests a waiver of Sections 25.137 and 25.114 of the Commission's rules, to the extent that Inmarsat has not provided the information required herein.[5]

The Commission may grant a waiver for good cause shown.[6] A waiver is appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest. In this case, good cause for a waiver of portions of Section 25.114 exists. Much of the information sought by Section 25.114 is not relevant to the proposed testing.

As noted above, Inmarsat has provided the required information to the extent that it is relevant to the testing service for which Inmarsat seeks authorization.

Good cause also exists to waive portions of Section 25.137, to the extent the information required is not provided herein. Section 25.137 is designed to ensure that "U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services" in other countries. Here, there is no service being provided by the satellite; Inmarsat is only conducting testing of the Southbury Gateway. Thus, the purpose of the information required by Section 25.137 is not implicated here.

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[3] 47 C.F.R. § 25.137(a).

[4] In comparable operations that are executed under an STA, the earth station operator seeks to waive the requirements of 25.137 given the temporary nature of the mission. For example, Universal Space Network, Inc. sought a similar waiver for a Pre-LEOP test campaign. *See* file number SES-STA-20211129-01842 filed November 29, 2021 and granted on February 22, 2022.

[5] 47 C.F.R. §§25.137 and 25.114.

[6] 47 C.F.R. §1.3.

Grant of the requested STA will serve the public interest, convenience, and necessity because it will help ensure that the Southbury Gateway performs according to requirements in advance of the commencement of operations of Inmarsat 6-F2. Inmarsat respectfully requests that the Commission grant STA for this limited purpose prior to grant beginning September 20, 2022, for a period of thirty days.

ATTACHMENT—TEST PLAN

1. Antenna Measurement

Frequency band:
27.5 – 30.0 GHz / 17.7 – 17.8; 17.9 – 20.2 GHz

Carrier type:
CW, one carrier per channel at the channel center frequency, maximum of 6 simultaneous carriers across the band in the channels shown below.

Uplink freq., beam, polarisation	**Uplink EIRP per channel**	**Downlink freq., beam, polarisation**	**Downlink EIRP at beam peak, per channel**	**channel bandwidth**
27.5 – 30.0 GHz, R & LHCP	52-79 dBW	17.7 – 17.8; 17.9 – 20.2 GHz, R & LHCP	41-64 dBW	up to 200 MHz

Note:

1. Approximate test duration per channel: 60 minutes.

2. One Steerable Spot beam will be illuminated over the Southbury IOT site.

3. All tests will use a 13.2 m antenna.

2. RF Performance Measurement

Frequency band:
27.5 – 30.0 GHz / 17.7 – 17.8; 17.9 – 20.2 GHz

Carrier type:

1. One CW carrier for each test and a set of loading carriers to help achieve the correct operating point in a channel, or multiple CW carriers depending on the test type.

2. NPR measurements use multi-tone with a center notch, test to be performed one channel at a time at the EIRP and polarization shown below.

Uplink freq., beam, polarisation	**Uplink EIRP per channel**	**Downlink freq., beam, polarisation**	**Downlink EIRP at beam peak, per channel**	**Channel bandwidth**
27.5 – 30.0 GHz, R & LHCP	53 – 76 dBW	17.7 – 17.8 GHz; 17.9 – 20.2 GHz, R & LHCP	41-64 dBW	Various channel bandwidths

Note:

1. Approximate test duration per channel: 60 minutes.

2. One Steerable Spot beam will be illuminated over the Southbury IOT site.

3. All RF Performance Measurement tests will use the 13.2 m antenna.