

Description of STA Request

Inmarsat Inc. (“Inmarsat”) hereby requests special temporary authority (“STA”) to test a new antenna at Comsat’s Southbury, Connecticut, earth station facility (the “Southbury gateway”) which is in the final stages of construction.¹ The Southbury gateway is planned to provide TT&C and feeder link services for future Inmarsat satellites using a 13.2-meter antenna.

Inmarsat expects to soon file an earth station application seeking authority for the Southbury gateway antenna to communicate with a future Inmarsat satellite. Inmarsat needs to ensure that the Southbury gateway antenna is operating properly well in advance of future satellite launch. This application seeks STA to test the Southbury gateway antenna with an active Inmarsat satellite, Inmarsat 5-F2 (“I5-F2”), located at the 55° W.L. orbital location.²

The antenna tests will consist of uplink transmissions from and downlink transmissions to the Southbury gateway antenna.

The uplink transmissions will consist of a continuous wave carrier from the Southbury gateway antenna to the I5-F2 satellite at 55° W.L. The signals from the Southbury gateway antenna will be downlinked to Inmarsat’s gateway in Lino Lakes, Minnesota, using previously authorized frequencies, and will be monitored and measured by Inmarsat to assess the Southbury gateway earth station antenna performance.

The downlink transmissions to the Southbury gateway antenna will originate at Inmarsat’s Lino Lakes gateway earth station (call sign E120072) on previously authorized frequencies. This signal will be received by the Southbury gateway and measured by Inmarsat to assess the Southbury gateway earth station antenna performance.

The below table provides the carrier parameters to be used for the Southbury gateway antenna performance verification testing.

	Uplink from Southbury
Carrier designation	1K00NON
Bandwidth	1 kHz
Transmit antenna diameter	13.2 m
Transmit antenna gain	69.2 dBi

¹ The Southbury gateway consists of one 13.2-meter antenna. The antenna coordinates, 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 The Inmarsat 5-F2 satellite has been authorized to provide service in the United States permitting U.S. earth station operators authority to access the satellite. File No. SES-LIC-20120426-00397; Call Sign E120072. See Inmarsat Mobile Networks Inc., Application to Operate a Fixed-Satellite Service Gateway Earth Station Facility in Lino Lakes, Minnesota with the Inmarsat 5-F2 Space Station, Order, DA 15-392, 30 FCC Rcd. 2,770 (Int’l Bur. 2015).

Maximum uplink EIRP	42.0 dBW
Maximum satellite (downlink) EIRP	25.0 dBW
FREQ 0	Outbound Carriers
U/L Frequency	29508.2 MHz
Polarization	Right Hand Circular

	Downlink to Southbury
Carrier designation	1K00NON
Bandwidth	1 kHz
Receive antenna diameter	13.2 m
Transmit antenna gain	65.0 dBi
Maximum uplink EIRP	51.9 dBW
Maximum satellite (downlink) EIRP	32.0 dBW
FREQ 0	Inbound Carriers
D/L Frequencies	19707 MHz & 19670 MHz
Polarization	Left Hand Circular

The I5-F2 satellite at the 55° W.L. orbital location is within the arc covered by the 18 GHz Comsearch Frequency Analysis Coordination Report prepared for the Southbury gateway for downlink operations below 19.7 GHz.³ Inmarsat Inc. incorporates by reference the technical information contained in this Report.

Grant of the requested STA will serve the public interest, convenience, and necessity because it will help ensure that this new earth station facility performs according to its design specifications and can reliably be used to control and communicate with future Inmarsat satellites. Inmarsat respectfully requests that the Commission grant STA beginning March 21, 2022, for a period of 30 days.

³ See Exhibit B.