

Request for Special Temporary Authority

Viasat, Inc. ("Viasat") herein requests 180 days, beginning July 1, 2019, for Special Temporary Authority ("STA") to use its Pendergrass, Georgia 5.4 meter earth station (call sign E160161) to communicate with the Astroscale "Client" non-geostationary orbit ("NGSO") satellite, which operates in the Earth Exploration Satellite Service ("EESS") frequency band. The Viasat ground station will be used with the Astroscale Client satellite for telemetry, tracking, and control ("TT&C") and downlinking mission data.

The Astroscale Client satellite is a part of a two-satellite constellation serving as a proof of concept for Astroscale's business of orbital debris removal. An STA for the other satellite (called "Servicer") in the Astroscale constellation has been filed separately by Denali 20020, LLC. See IBFS No. SES-STA-20200113-00043 (filed Jan. 13, 2020); see also IBFS No. SES-MFS-20200113-00026 (filed Jan. 13, 2020). The expected lifetime of the Astroscale spacecraft is 6 to 12 months. Accordingly, a request for a 6-month renewal may be filed prior to expiration of this STA to continue service for the life of the mission.

The Astroscale Client satellite operates in the Earth Exploration Satellite Service ("EESS") S-band frequency. The nominal altitude is 550 km with a nominal orbit inclination of 98 degrees. An ITU filing for the Astroscale constellation (ELSA-d) has been submitted by the Japanese administration, BR SNS ID number 116545165. Orbital parameters for the constellation are shown in Table 1.

Table 1 Orbital Parameters

Number of Orbital Planes	Number of Satellites	Inclination	Period [minutes]	Apogee [km]	Perigee [km]
1	2	98	95.6	600	500

Grant of Viasat's STA request will serve the public interest by facilitating the testing of a potential solution for orbital debris removal. A market access request, pursuant to 47 CFR § 25.137, for this non-USA satellite, and other additional information regarding the Astroscale mission is provided in Denali's applications filed with the FCC and are incorporated herein by reference. See IBFS No. SES-STA-20200113-00043 (filed Jan. 13, 2020); see also IBFS No. SES-MFS-20200113-00026 (filed Jan. 13, 2020).

The emission details are included below and are within the current limits of the FCC license grant, SES-MOD-20180206-00088, for Viasat's ground station.

Table 2 Uplink Emission

Frequency [MHz]	Polarization	Emission Designator	Max EIRP [dBW]	Max EIRP Density [dBW/4 kHz]	Service
2073.000	R	61K4G1D	46.6	36.8	TT&C

Table 2 Downlink Emissions

Frequency [MHz]	Polarization	Emission Designator	Max EIRP [dBW]	Max EIRP Density [dBW/4 kHz]	Service
2251.000	L	61K4G1D	-10.7	-20.5	TT&C & Data
2251.000	L	184KG1D	-5.9	-20.5	TT&C & Data

As stated in the Denali applications, the relevant parties have commenced coordination with affected stakeholders.

Viasat's 24x7 contact information for the Pendergrass earth station is 720-493-7300