

EXHIBIT 1

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

Pursuant to 47 C.F.R. § 25.120(b), EchoStar Satellite Operating Corporation (together with its affiliates, “EchoStar”) requests 30-day special temporary authority (“STA”) to deorbit the EchoStar 8 satellite (Call Sign 2439).

As EchoStar previously informed the Satellite Division staff, the EchoStar 8 satellite experienced an anomaly on April 18, 2017. Despite attempts to resolve the anomaly, EchoStar experienced difficulties maintaining EchoStar 8 within its station-keeping box. Consequently, on April 25, the Commission granted EchoStar’s request for a 30-day STA to operate the satellite under Commission jurisdiction to facilitate orderly retirement of the satellite.¹

As of April 27, the EchoStar 8 satellite is orbiting at approximately 79° W.L. at a westward drift rate of approximately 0.3 degree per day, and EchoStar expects to commence maneuvers to deorbit the satellite late in the day of April 27, 2017. EchoStar will use existing licensed earth stations in Cheyenne, WY (Call Signs E980127 and E980047), and Gilbert, AZ (Call Signs E030168 and E070015) for telemetry, tracking, and control (“TT&C”) communications required to deorbit the satellite on the same frequencies authorized under the existing STA grant, as follows:

EchoStar 8 Uplink Frequency/Polarization	EchoStar 8 Downlink Frequency/Polarization
TC1 14.003 GHz = (RHCP) In use	TM1 – 12.207 GHz = (LHCP)
TC2 14.016 GHz = (RHCP)	TM2 – 12.206 GHz = (LHCP)

¹ See EchoStar, Application for STA, IBFS File No. SAT-STA-20170421-00066 (Call Sign 2439) (granted Apr. 25, 2017). EchoStar 8 was previously operating under Mexican authority. However, the letters exchanged between the Federal Communications Commission (“FCC”) and the Comisión Federal de Telecomunicaciones of Mexico stated that EchoStar 8 would be subject to FCC licensing, “including any operations as a result of equipment failure in the satellite that results in the inability to maintain the satellite within ±0.1 degrees of its assigned position at the 77° W.L. orbital location.” *Id.*

End-of-life disposal of the satellite is expected to be performed through a series of multiple controlled burns using normal station-keeping thruster sets. Due to multiple thruster anomalies, the satellite is incapable of performing large maneuvers, and thus is expected to require two drift correction maneuvers per day for approximately 22 days. These drift correction maneuvers are expected to be completed by approximately May 20, and will result in placing the satellite at a disposal perigee altitude of approximately 400 km above the geostationary satellite orbit (“GSO”), which meets the minimum perigee altitude (*i.e.*, 357 km. above GSO) required under 47 C.F.R. § 25.283(a). At the end of the deorbit maneuvers, the satellite is expected to achieve a Sun-synchronous eccentricity of approximately 0.0004. EchoStar’s calculation for the minimum deorbit perigee is as follows:

EchoStar 8	
Min. perigee = 36,021 km + 1000 x Cr x A/M	
Cr	2
A	112 m ²
M	1833.7 kg
	36143 km
GSO	35786 km
	357 km above GSO

EchoStar 8 is a bi-propellant system requiring use of both fuel and oxidizer. The following chart illustrates the propellant amounts that will be used for the deorbit.

EchoStar 8 Propellant Estimates	Fuel	Oxidizer
Estimated Remaining Usable Propellant as of April 20, 2017	26.23 kg	>15 kg (minimum)
Propellant Needed for Deorbit	6.5 kg	12.4 kg

Consistent with 47 C.F.R. § 25.283(b), EchoStar will conduct TT&C operations using authorized frequencies to remove the satellite from GSO at the end of its useful on a non-harmful interference basis, subject to compliance with the minimum perigee altitude required for end-of-life disposal, and further subject to coordination with any potentially affected satellite networks.

Furthermore, consistent with 47 C.F.R. § 25.283(c), EchoStar expects that all stored energy sources on board the satellite will be depleted upon completion of deorbit maneuvers. The batteries will be left in a permanent state of discharge, chemical propulsion systems will be depleted, and the electrical propulsion system will be disabled.