

REQUEST FOR EXTENSION OF SPECIAL TEMPORARY AUTHORITY

On November 7, 2019, the Commission granted in part and deferred in part Space Exploration Holdings, LLC's ("SpaceX") request for Special Temporary Authority ("STA") for its non-geostationary orbit ("NGSO") satellites launched on November 11, 2019.¹ SpaceX respectfully requests that the Commission extend that STA – including the portion initially deferred – for an additional 30 days for the reasons discussed below.

The current STA authorizes SpaceX (1) to perform telemetry, tracking, and control ("TT&C") functions necessary for orbit-raising of each of the 60 satellites launched on November 11 from the insertion altitude of 280 km to an altitude of 350 km for initial payload testing and then to raise 20 of those satellites to a previously authorized orbital plane at an altitude of 550 km; and (2) to test the communications payload on each of the 60 satellites using the 10.7-12.7 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth) and 14.0-14.5 GHz, 27.5-29.1 GHz, and 29.5-30.0 GHz (Earth-to-space) frequency bands. The Commission deferred action on that portion of SpaceX's request to raise and operate the remaining satellites in orbital planes proposed in its then-pending modification application. That modification has since been approved, and SpaceX has renewed its request that the Commission grant authority to continue orbit raising and testing of its remaining satellites so that they can proceed to populate the newly-authorized orbital planes.²

Pursuant to the STA, SpaceX has been communicating with earth stations operated by its sister company, SpaceX Services, Inc. ("SpaceX Services") during the orbit-raising phase and early operations of its satellites. Applications for all of those earth stations are currently pending.³ SpaceX has operated with these earth stations pursuant to the STA for nearly two months, and has received no complaints from any other authorized spectrum user.

Allowing continued communications between the SpaceX space stations and SpaceX Services earth stations would serve the public interest. The STA covers TT&C functions that are essential to commanding the spacecraft and ensuring the health and safety of SpaceX's nascent constellation. This is especially important for those satellites that have been holding at an altitude of 350 km awaiting authorization to proceed to the newly-authorized orbital planes at 550 km. The STA also allows SpaceX to confirm the operational status of its satellites. Extending the STA would allow SpaceX to continue to provide TT&C functions that are essential to commanding all of these spacecraft and ensuring continuing monitoring of and control over SpaceX's nascent

¹ See Public Notice, DA 19-1178 (rel. Nov. 15, 2019). As required under the STA, SpaceX confirmed the November 11, 2019 launch and commencement of operations date for its satellites, which began the term of the STA.

² See *Space Exploration Holdings, LLC*, DA 19-1294 (rel. Dec. 19, 2019); Letter from William M. Wiltshire to Marlene H. Dortch, IBFS File No. SAT-STA-20190924-00098 (Dec. 20, 2019).

³ SpaceX Services currently has applications pending for six Ku-band gateway earth stations (located in North Bend, WA; Conrad, MT; Merrillan, WI; Greenville, PA; Redmond, WA; and Hawthorne, CA); one Ku-band TT&C earth station (located in Brewster, WA); and five Ka-band gateway earth stations (located in Conrad, MT; Loring, ME; Redmond, WA; Greenville, PA; and Merrillan, WI). See Public Notice, Rep. No. SAT-01388 (rel. May 10, 2019); IBFS File Nos. SES-LIC-20190816-01062 and -01063, SES-LIC-20190827-01110, SES-LIC-20190906-01170 and -01171.

constellation, as well as maintaining communications with these craft to assess their functionality. Accordingly, extension of the STA will continue serve the public interest by enhancing space safety and promoting the health and safety of SpaceX's NGSO constellation.

SpaceX will continue to operate on a non-interference basis. Consistent with its authorization, SpaceX will observe the applicable equivalent power flux-density ("EPFD") limits set forth in Article 22 and Resolution 76 of the ITU Radio Regulations and the applicable power flux-density ("PFD") limits set forth in the Commission's rules and Article 21 of the ITU Radio Regulations, which the Commission has found sufficient to protect GSO systems and terrestrial systems, respectively, against harmful interference. Nonetheless, in the extremely unlikely event that harmful interference should occur due to transmissions to or from its spacecraft, SpaceX will take all reasonable steps to eliminate the interference. Should an issue arise, SpaceX can be reached at satellite-operators-pager@spacex.com, which links to the pagers of appropriate technical personnel 24/7.

Accordingly, SpaceX requests that the Commission extend the STA for these space stations for an additional 30 days.