

## REQUEST FOR SPECIAL TEMPORARY AUTHORITY

SpaceX Services, Inc. (“SpaceX Services”), pursuant to Section 25.120 of the Commission’s rules, hereby requests Special Temporary Authority (“STA”) to add additional Ka-band frequencies to and lower the minimum elevation angle of its polar gateway earth station in Nome, Alaska (the “Nome gateway”) to support the critical early-mission period, including orbit raising, of upcoming high-inclination launches of non-geostationary orbit (“NGSO”) satellites operated by its sister company, Space Exploration Holdings, LLC (“SpaceX”).

SpaceX has been authorized to launch and operate a constellation of 4,408 (“NGSO”) satellites (call sign S2983/S3018) using Ku- and Ka-band spectrum.<sup>1</sup> SpaceX is authorized to operate its Ka-band gateway links with elevation angles as low as five degrees in polar regions.<sup>2</sup> In June 2021, SpaceX Services received authority to deploy and operate the Nome gateway.<sup>3</sup> It has been operating the Nome gateway since June 2021 and has received no complaints of harmful interference.

This application requests carefully limited, temporary authority solely to lower the minimum elevation angle of the Nome gateway from 25 degrees to five degrees, and to authorize communications between SpaceX Services’ Ka-band Nome gateway and SpaceX’s authorized satellites in additional Ka-band frequencies. SpaceX seeks temporary authority for the early-mission period of a series of high-inclination launches beginning in January 2023, which will serve polar regions with high-speed, low-latency broadband service. This application does not seek authority to deploy any additional satellites or earth stations. It also does not seek any change in the technical or operating characteristics of the SpaceX satellites and SpaceX Services earth stations the Commission has already authorized, except for this narrow change to minimum elevation angle and uplink frequencies at the Nome gateway. This temporary operation will enable more robust early-mission contact with high-inclination satellites—including telemetry, tracking, and command (TT&C), testing, and communications—further improving deployment safety for satellites that will provide critical connectivity to polar regions of the United States. This operation would take place throughout the 27.5 – 28.35 GHz (uplink) band, a band in which SpaceX’s satellites and the majority of SpaceX Services’ gateways are already authorized to operate.

The Commission has good cause to approve this request quickly. Speedy authorization will increase the safety of SpaceX’s upcoming polar launches during the early-mission period, including orbit raising, and will accelerate deployment of SpaceX’s next-generation satellite service, especially in significantly underserved polar regions. This greater safety and speed will, in turn, improve access to high-speed, low-latency broadband connectivity for underserved consumers, businesses, and community anchor institutions, including schools, hospitals, and

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<sup>1</sup> See *Space Exploration Holdings, LLC*, 36 FCC Rcd. 7995 (2021) (“*SpaceX Authorization*”).

<sup>2</sup> See *id.* ¶ 1 n.3.

<sup>3</sup> See Radio Station Authorization, IBFS File No. SES-STA-20210528-00866 (granted June 15, 2021), and IBFS File No. SES-LIC-20210527-00861 (granted July 21, 2021). The call sign for this earth station is E210114.

community centers. Due to the high inclination of SpaceX's forthcoming launches, SpaceX Services will rely disproportionately on its Nome, Alaska gateway site for early-mission contact, requiring access to additional bandwidth and elevation angles that were not required when SpaceX Services first applied for the Nome gateway. The additional bandwidth and lower elevation angles are therefore critical to more safely and quickly deploy next-generation satellite service to some of the most underserved areas of the country, driving high-speed, low-latency broadband connectivity that will help consumers connect to work, school, healthcare, and government services. Furthermore, this request is temporary in nature, supporting early-mission contact with satellites designed to cover the polar regions of the United States and other points around the globe. Accordingly, this request is in the public interest.

SpaceX Services' operations at the Nome gateway in the 27.5 – 28.35 GHz (uplink) band will be conducted 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 generally found sufficient to protect GSO systems and terrestrial systems, respectively, against harmful interference. SpaceX Services recognizes that there are additional requirements for coordination with in-band Upper Microwave Flexible Use Service ("UMFUS") operators, but it is unaware of any such systems currently operating within the vicinity of the Nome gateway that would receive harmful interference.

In the extremely unlikely event that harmful interference should occur due to transmissions to SpaceX spacecraft in this band, SpaceX Services will take all reasonable steps to eliminate the interference. Should an issue arise, SpaceX Services can be reached at [satellite-operators-pager@spacex.com](mailto:satellite-operators-pager@spacex.com), which links to the pagers of appropriate technical personnel 24/7.

SpaceX Services requests that the Commission issue an STA structured to begin before January 9, 2023 and remain in force for up to 60-days thereafter. In parallel, SpaceX plans to seek authority to add the lower elevation angle and 27.5 – 28.35 GHz band to the Nome gateway on a permanent basis, beginning with required pre-coordination with UMFUS operators.