



Federal Communications Commission
Washington, D.C. 20554

October 28, 2021

VIA ELECTRONIC MAIL

Mr. Will Lewis
Spaceflight, Inc.
1505 Westlake Ave. N.
Suite 600
Seattle, WA 98109
Wlewis@spaceflight.com

Re: Spaceflight, Inc.
IBFS File No. SAT-STA-20210812-00098

Dear Mr. Lewis:

Thank you for your October 5, 2021 reply to our inquiry regarding Sherpa-LTC1.¹ We respectfully request some additional information to enable us to complete our review of your application. In responding, please also include any necessary updates to reflect the manifest updates that Spaceflight has informally communicated to staff, including, but not limited to, updates to orbital debris mitigation information and mission profile.

1. Spaceflight replied with additional details in its October 5, 2021 response regarding inhibiting transmissions from the X-band transceiver.² Please confirm that LTC1 will not receive any X-Band signals, and please outline any steps taken to prohibit this from occurring accidentally.
2. Spaceflight indicates that the Sherpa-LTC1 will descend to a lower orbit for its demonstration phase. Please describe in detail the demonstration test phase of the Sherpa-LTC1, especially as it relates to the propulsion system and any planned propulsive maneuvers/tests.
3. Please indicate whether the end-of-life plan for the spacecraft is to have it decay under natural forces from an altitude of 500 km, or whether any orbit lowering from the 500 km altitude, using propulsion, is contemplated.
4. Spaceflight indicates that it sought to develop a fully demisable design for the Sherpa-LTC1 but was prevented from doing so due to design and timeline constraints.³ Please indicate the anticipated additional time that would be required to complete development. Were there any analyses performed using alternative material types that would show the difference in demisability between the materials that were considered and the materials that are currently being used?

¹ Letter from Will Lewis, Sr. Manager, Regulatory, Spaceflight, Inc., to Marlene H. Dortch, Secretary, FCC, dated Oct. 5, 2021).

² *Id.* at 2.

³ *Id.* at 4-5.

5. The recently provided update indicates a Sherpa-LTC-1 dry mass of 230.5 kg,⁴ but the Debris Assessment Software (DAS) logs supplied in the original application materials⁵ indicate a DAS analysis using a 258 kg value. Please update the file to include a DAS log reflecting the lower mass. Additionally, please confirm the cross-sectional area values for both successful and failed mission profiles.

The requested information must be submitted no later than **November 4, 2021**.

Sincerely,

Karl A. Kensinger

Karl A. Kensinger
Chief, Satellite Division
International Bureau

⁴ *Id.* at 6.

⁵ *See* Spaceflight, Inc., Application for Special Temporary Authority, IBFS File No SAT-STA-20210812-00098, Attach. 1, Exh. B (Orbital Debris Assessment Report) at 9 and 18.