



Federal Communications Commission  
Washington, D.C. 20554

October 6, 2015

Jonathan L. Wiener  
Goldberg Godles Wiener & Wright LLP  
1229 19<sup>th</sup> Street, NW  
Washington, D.C. 20036

Re: Spaceflight, Inc. Application for Special Temporary  
Authority to Communicate with the SHERPA spacecraft  
IBFS File No. SAT-STA-20150821-00060

Dear Mr. Wiener:

On August 21, 2015, Spaceflight, Inc. filed an application for special temporary authority to communicate with a non-geostationary orbit space station to be known as SHERPA. The application describes SHERPA as a spacecraft with a payload consisting of auxiliary satellites for deployment, and seeks to use the 401.5 MHz (space-to-Earth) and 450.2 MHz (Earth-to-space) frequencies for communications with SHERPA while the deployments take place.<sup>1</sup> The request states that SHERPA will be placed in a sun synchronous, elliptical orbit with an apogee of 720 kilometers and a perigee of 450 kilometers.<sup>2</sup> To aid the Commission's evaluation of the application, please provide the following supplemental information:<sup>3</sup>

1. Publicly-available information indicates that there will be approximately eighty-seven (87) satellites on board to be deployed from SHERPA. Please provide a list of the satellites planned for deployment. Please also indicate the authorizing administration or administrations, current or planned (under the United Nations Outer Space Treaties<sup>4</sup> and International Telecommunication Union Radio Regulations) for each space object to be deployed.
2. The Technical Annex states that "[t]he confirmation of successful payload deployment is given by the transmission of telemetry containing SHERPA state vectors taken upon each discrete deployment event."<sup>5</sup> Please provide additional detail concerning the specific "state vectors." Will this information be shared with the Department of Defense's Joint Space Operations Center (JSpOC)?

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<sup>1</sup> See Application, Technical Annex at 2.

<sup>2</sup> See Application, Narrative.

<sup>3</sup> 47 C.F.R. § 25.111(a).

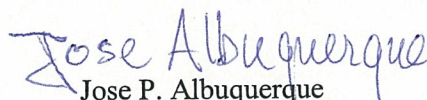
<sup>4</sup> See, e.g., the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Article 6.

<sup>5</sup> Application, Technical Annex at 1.

3. Please address whether SHERPA could accomplish its mission while attached to the upper stage of the launch vehicle. Does the physical configuration of SHERPA permit such deployment?
4. Please also provide the following supplemental information related to the orbital debris mitigation plan submitted with the application:
  - a. The Technical Annex states that the inclination of the spacecraft will be 97.4°, but the orbital debris assessment states that the inclination will be 97.8°. <sup>6</sup> Please correct the discrepancy and, if necessary, update affected portions of the orbital debris assessment.
  - b. The Narrative and Technical Annex state that the operational lifetime of the spacecraft will be 12 hours, but the orbital debris assessment states that the operational lifetime will be 6 hours. <sup>7</sup> Please correct the discrepancy.
  - c. Please indicate whether a casualty risk assessment using higher fidelity methods can be reasonably expected to predict demise of all components during re-entry, except for components that would impact with an energy of less than 15 joules. If so, please provide that analysis. You may wish to take into consideration the breaking up into smaller components of the spacecraft upon re-entry.
  - d. Please provide the estimated orbital lifetime of SHERPA assuming that none of the payload spacecraft deploy from SHERPA.
  - e. What insurance will be obtained for SHERPA operations and spacecraft re-entry?

To facilitate the Commission's timely evaluation of Spaceflight, Inc.'s application, we ask that you provide the requested information no later than November 2, 2015.

Sincerely,

  
Jose P. Albuquerque  
Chief, Satellite Division  
International Bureau

cc: Indra Hornsby, General Counsel, Spaceflight, Inc.

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<sup>6</sup> Application, SHERPA Orbital Debris Assessment Report (ODAR) at 5.

<sup>7</sup> *Id.*