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November 23, 2016

Mr. Jose P. Albuquerque Chief, Satellite Division International Bureau Federal Communications Commission 445 12th Street, SW Washington, DC 20554

> Re: Space Station Special Temporary Authority, File No. SAT-STA-20150821-00060, <u>Response to Questions</u>

Dear Mr. Albuquerque:

This letter responds to the questions that you raised with us in your November 16, 2016 e-mail regarding our November 14, 2016 letter regarding the use of mass simulators onboard the SHERPA spacecraft.

We address the specific questions raised below:

Question 1: In your ODAR assessment for the collision risk of the SHERPA spacecraft itself, you specified that the collision risk for the spacecraft during the orbital lifetime of the spacecraft was 0.00011. Could you please update this collision risk assessment for SHERPA based on the increased mass of the spacecraft resulting from the mass simulators?

Response: With the increased mass, the collision risk as computed by NASA DAS Software is 0.00016. This is compliant with NASA requirements.

Question 2: Also in your ODAR you indicated that the total orbital lifetime for the SHERPA spacecraft would be 17.2 years. Could you please provide an updated

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assessment of the total orbital lifetime for the spacecraft based on increased mass resulting from the mass simulators?

Response: With the increased mass, the total orbital lifetime is expected to be 17.7 years. This is compliant with NASA requirements. This was also calculated with NASA DAS software.

Questions 3: In addition, you had indicated that the risk of human casualty from atmospheric re-entry of the SHERPA spacecraft was 1:18,800 as calculated by the DAS software. Will any materials used in the mass simulators be likely to survive atmospheric re-entry, and will your prior assessment of casualty risk be affected by the addition of the mass simulators to the spacecraft?

Response: With the increased mass and recalculation using NASA DAS software, the risk of human casualty is 1:18,500. The mass simulators are not expected to survive reentry.

Please let us know if there are any additional questions.

A copy of this letter is also being uploaded into the Commission's pubic record file.

Respectfully submitted,

<u>/s/Henry Goldberg</u> Henry Goldberg Jonathan L. Wiener *Attorneys for Spaceflight, Inc.*