To: Krystle Curnutte E-Mail: krystle@tyvak.com From: Leann Nguyen Date: March 11, 2019

Subject: Request for Info - File # 0987-EX-CN-2018

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Message:

As International Bureau requested, please provide the following information:

- 1. Provide the completed Spacecap .mdb file using the latest Version8 software. Insure there are no fatal errors. Send it directly to Joseph Hill and Jeanette Spriggs and cc to Leann Nguyen
- 2. ODAR includes a rights notice that is inappropriate for FCC submission. Please remove.
- 3. The ODAR is internally inconsistent on whether parts survive re-entry. The summary compliance table indicates "no parts" while the ODAR at page 19 indicates a surviving part, based on a DAS analysis.
- a. The applicant should either undertake additional modelling in DAS or using higher fidelity methods in order to determine whether any parts survive re-entry.
- b. If a part or parts are expected to survive re-entry, the applicant will need to provide a detailed justification for the choice of materials.
- 4. The ODAR indicates a propulsion system that utilizes an ionic liquid. Please indicate whether the liquid, if released into space, can be expected to evaporate, or whether it would persist in droplet form. If it would persist, please provide a detailed analysis concerning possible system failure modes, and containment measures, etc. The ODAR suggests a possible failure mode involving battery combustion resulting in melting of plastic containment vessel. Please specifically address this possible failure mode. Does this particular system have any flight heritage?
- 5. Please provide information concerning maneuver plans for the spacecraft. Is any raising of the satellite above its initial injection orbit contemplated? Will the satellite be maintained at a specific altitude, and with what tolerance, if any? Will propulsion be used solely to lower altitude and reduce orbital lifetime? Will any maneuvers be assessed for collision risk and coordinated with space situational awareness organizations?

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of March 11, 2019 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

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Responses to this correspondence must contain the Reference number: 46666