Blue Canyon Technologies
2425 55th St, STE 200 BLDG A
Boulder, CO 80301
www.bluecanyontech.com

June 23rd, 2016

Ms. Leann Nguyen:

SUBJECT: STA application 1257-EX-ST-2015 reference number 32515

This letter is in response to your request for additional information with regards to our STA application #1257-EX-ST-2015.

1. Explain what the UHF antenna is being used for and if it is transmitter or receiving and are there any other radio transmitters on the satellite.

   The UHF antenna is connected to an AstroDev Li-1 radio which is being used for the satellite command and control link. RAVAN will be commanded from the Blue Canyon Technologies ground station in Boulder Colorado. A separate experimental license application has been submitted for this link (0368-EX-PL-2016). No additional radio transmitters are included on the spacecraft.

2. It is unclear who will be operating the satellite. The language in the ODAS section 2 makes it clear that Blue Canyon will build, but it is not clear who is responsible for the operations.

   Blue Canyon Technologies will be operating the spacecraft using the mission operations center and ground station located in Boulder Colorado.

3. There is surviving debris from this satellite. We need additional information from the applicant about who the responsible party is in the event that there is a casualty from the satellite re-entry. We are particularly concerned because it appears that RAVAN is intended to be a tech demonstrator for a constellation, so the aggregate risk would be considerably higher. Alternatively, a higher fidelity analysis may establish that the stainless steel component will demise; if the applicant can undertake that analysis and establish a zero casualty risk, this issue is moot.

   A more detailed analysis of the stainless steel components is currently being conducted and will be completed and submitted by July 1st, 2016.

4. Unclear why this is an STA.

   The Globalstar system included on RAVAN is part of a system technology demonstration. It is expected that this system will only be utilized for the first 6 months of the mission. The UHF link will be utilized for the primary mission commanding, telemetry and data link.

5. The applicant must indicate whether they will assist the JSPoC in cataloging the spacecraft, and whether, upon receipt of a conjunction warning from the JSpOC or other source, the

licensee will review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including, but not limited to: contacting the operator of any active spacecraft involved in such warning; sharing ephemeris data and other appropriate operational information with any such operator; modifying spacecraft attitude and/or operations.

Blue Canyon Techologies will cooperate fully with JSPoC as outlined above upon receipt of a conjunction warning.

Please don't hesitate to contact me (jcarvo@bluecanyontech.com) if you have any additional questions.

Regards,
John Carvo
RAVAN Mission Manager
Blue Canyon Technologies