Astro Digital US Inc.
3171 Jay Street
Santa Clara CA, 95054

Date: 4 FEB 2019

To: Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW, Washington, DC 20554

REF: Supplemental Letter for Momentus X1 (ELS Application # 0698-EX-CN-2018)

Dear Ms. Dortch,

Astro Digital is submitting this letter to reflect certain changes to the Momentus X1 mission profile pursuant to discussions with the Federal Communications Commission.

Mission Profile and Post-Mission Disposal

As discussed during our call on Friday 1 FEB 2019, the Momentus-X1 mission concept of operations has been modified to use all available deltaV (20 m/s) in the propulsion system to reduce the satellite perigee by as much as possible. Additionally, it has come to our attention since our call on Friday, that the new injection orbit for the Momentus X1 satellite has been lowered to 530 km (from 585 km) by the launch authority. With the updated mission concept of operations to use all available deltaV to lower the perigee, the satellite's resulting end of mission orbit is expected to be 530 x 457 km, which results in a post-mission orbital decay period of 2.9 years.

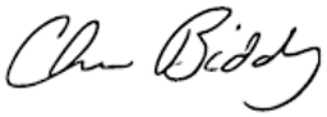
Surviving Debris Analysis Update

Higher fidelity surviving debris analysis was conducted with "as built" exact specifications for materials and components of the Momentus-X1 satellite versus worst-case assumptions that were included in the original license application. Our initial analysis assumed worst-case mass and material properties for four items of interest, and resulted in two pieces of surviving debris, a sapphire crystal with impact energy of 1.55 joules and the remains of a stainless-steel water tank with impact energy of 4503 joules.

Conducting the analysis using more precise parameters for these two items, we found that the stainless-steel tank does not survive re-entry. The sapphire crystal still survives re-entry, but with an impact energy of 1.18 joules, well below the 15 joule maximum threshold.

I wanted to again thank you and your staff for working with us on our application. Please feel free to reach out with any additional questions or concerns.

Sincerely,



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