

The following request has been made by IB regarding application 1037-EX-CN-2023:

Please provide responses to the following items:

47 CFR 5.64(b)(4)(i)(E)

47 CFR 5.64(b)(5)

47 CFR 5.64(b)(5)(i)

47 CFR 5.64(b)(5)(ii)

47 CFR 5.64(b)(5)(iii)

The answers appear in the following text from the referenced sections of the CFR.

47 CFR § 5.64 Special provisions for satellite systems, states:

...

(b) Except where the satellite system has already been authorized by the FCC, applicants for an experimental authorization involving a satellite system must submit a description of the design and operational strategies the satellite system will use to mitigate orbital debris, including the following information:

...

(4) A statement that the space station operator has assessed and limited the probability of the space station(s) becoming a source of debris by collisions with large debris or other operational space stations.

(i) Where the application is for an NGSO space station or system, the following information must also be included:

(E) The space station operator must certify that upon receipt of a space situational awareness conjunction warning, the operator will review and take all possible steps to assess the collision risk, and will mitigate the collision risk if necessary. As appropriate, steps to assess and mitigate the collision risk should include, but are not limited to: contacting the operator of any active spacecraft involved in such a warning; sharing ephemeris data and other appropriate operational information with any such operator; and modifying space station attitude and/or operations.

Answer: The University of Nebraska - Lincoln certifies the above.

(5) A statement addressing the trackability of the space station(s). Space station(s) operating in low-Earth orbit will be presumed trackable if each individual space station is 10 cm or larger in its smallest dimension, exclusive of deployable components.

Answer: The spacecraft is 10 cm x 10 cm x 10 cm, and so meets this requirement.

Where the application is for an NGSO space station or system, the statement shall also disclose the following:

- (i) How the operator plans to identify the space station(s) following deployment and whether space station tracking will be active or passive;

Answer:

Initial state vectors will be provided by the launch provider and forwarded to the 18th Space Control Squadron.

The Iridium radio will beacon station ID and basic health info for the spacecraft. Onboard GPS will be used to provide position and velocity data, downlinked as telemetry to refine and augment orbital TLEs provided by 18th Space Control Squadron.

- (ii) Whether, prior to deployment, the space station(s) will be registered with the 18th Space Control Squadron or successor entity;

Answer: University of Nebraska – Lincoln will register the space stations with the 18th Space Control Squadron

- (iii) The extent to which the space station operator plans to share information regarding initial deployment, ephemeris, and/or planned maneuvers with the 18th Space Control Squadron or successor entity, other entities that engage in space situational awareness or space traffic management functions, and/or other operators.

Answer: University of Nebraska – Lincoln plans to share information regarding initial deployment and ephemeris with the 18th Space Control Squadron or successor entity. No maneuvers are planned. It is a 1U cubesat with no deployables and no propulsion system.