EXHIBIT B

R2 SPACE, INC. UPDATED ORBITAL DEBRIS MITIGATION PLAN

Orbital Debris Mitigation Plan Assessment[1]

Requirement Number	Requirement Text	Compliance and Reference
4.3-1	Debris passing through LEO – released debris with diameters of 1mm or larger.	COMPLY Section III.A., p. 6
4.3-2	Debris passing near GEO– released debris with diameters of 5mm or larger.	COMPLY Section III.A., p. 6
4.4-1	Limiting the risk to other space systems from accidental explosions during deployment and mission operations while in orbit about Earth or the Moon	COMPLY Section III.B., pp. 6-7
4.4-2	Design for passivation after completion of mission operations while in orbit about Earth or the Moon	COMPLY Section III.C., pp. 7-8
4.4-3	Limiting the long-term risk to other space systems from planned breakups for Earth and lunar missions	COMPLY Section III.B pp. 6-7
4.4-4	Limiting the short-term risk to other space systems from planned breakups for Earth orbital missions	COMPLY Section III.B., pp. 6-7
4.5-1	Limiting debris generated by collisions with large objects when in Earth orbit	COMPLY Section III.D., pp. 8
4.5-2	Limiting debris generated by collisions with small objects when operating in Earth orbit	COMPLY Section III.D., pp. 8
4.6-1	Disposal for space structures in or passing through LEO	COMPLY Section IV.A., pp. 8-9
4.6-4	Reliability of post-mission disposal operations in Earth orbit	COMPLY Section IV.A., pp. 8-9
4.7-1	Limit the risk of human casualty	COMPLY Section IV.B., p. 9

[1] All R2 Space calculations and analysis set forth herein utilized NASA'S Debris Assessment Software version 3.0.1 ("DAS").

ORBITAL DEBRIS MITIGATION PLAN

I. Program Management and Mission Overview

R2 Space, Inc. is a private company headquartered in Ann Arbor, Michigan. R2 Space was founded in 2018 in order to provide cutting-edge commercial satellite technology to address the intelligence, surveillance, and reconnaissance needs of the United States Government ("USG"). R2 Space plans to launch and operate a private remote sensing space system of up to eight satellites (XR-1 through XR-8) in low-Earth, non-geostationary orbits ("NGSO"). Each XR satellite is equipped with Synthetic Aperture Radar ("SAR") sensors capable of providing high-resolution imagery to support the needs of its USG customers.

R2 Space will dedicate the entirety of its XR constellation capacity to serving the needs of its USG customers. R2 Space was awarded a contract by the Defense Innovation Unit, accelerating R2 Space remote sensing solutions for use by the Department of Defense. R2 Space anticipates additional contracts from other USG departments and agencies,[2] and will provide precise information on mission sponsor and program executive when available. The mission does not involve any foreign government or space agency participation. The program manager and senior scientific management personnel responsible for the XR mission are identified below.

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[2] R2 Space anticipates additional contract awards from USG departments and agencies, such as the National Reconnaissance Office, Department of Defense, National Geospatial Intelligence Agency, Department of Navy, Department of Army, Department of Air Force, and Department of Homeland Security.

Sam Strosnider
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II. Spacecraft and Launch Information

A. Launch Information

R2 Space plans to launch and operate eight XR satellites over a series of launches. The XR-1 satellite will be the first deployment of the XR constellation with an anticipated launch date of December 16, 2020. R2 Space plans to launch the XR-1 satellite using the Falcon 9 launch vehicle, which will be launched out of the Vandenberg Air Force Base near Lompoc, California. The XR-1 satellite is projected to be in a Sun-Synchronous Orbit ("SSO") and have an operational altitude of 550 kilometers with a 97.7-degree inclination angle.[3]

Additional XR satellites will be launched subsequently thereafter. R2 Space will provide details regarding the follow-on XR satellite launches when such information becomes available and prior to launch. R2 Space has identified Falcon 9 and Electron as two potential launch vehicles for the subsequent XR satellite launches. The Falcon 9 vehicle would be launched out of the Kennedy Space Center in Florida or the Vandenberg Air Force Base in California. The Electron vehicle would be launched out of the Rocket Lab facility in Wallops Island, Virginia.

[3] All R2 Space calculations utilizing NASA's DAS software set forth herein are based on the underlying assumption that the XR satellite will have an operational altitude of 550 kilometers and an inclination angle of 97.7 degrees.

B. Spacecraft and Components

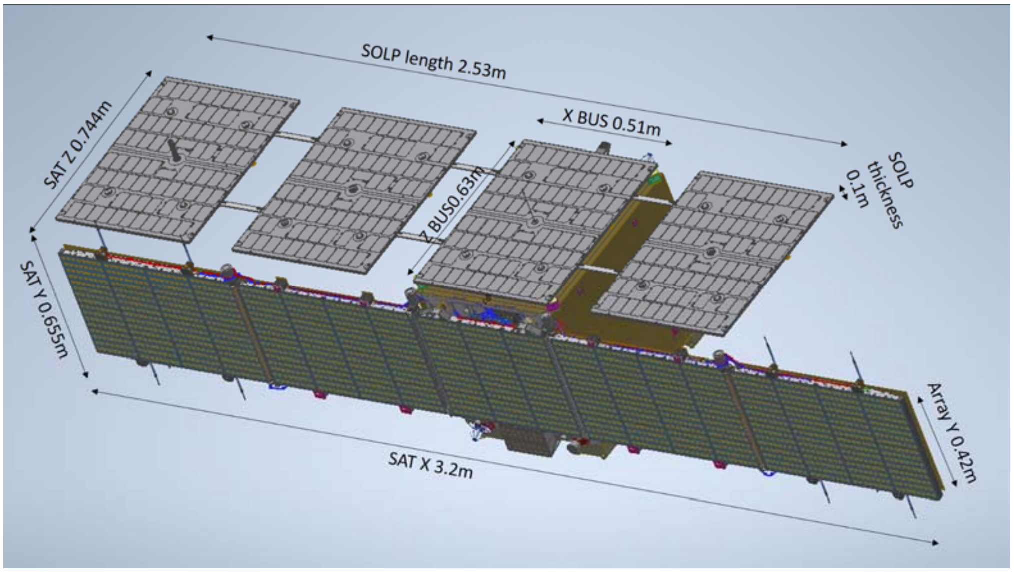
All of the XR satellites are expected to be identical.[4] Each XR satellite has a stowed form profile measuring 0.655 x 0.63 x 0.51 meters, with a total mass of 90 kilograms.. The satellite payload is a SAR sensor and data collection system consisting of an active phased array with both transmit and receive modules, transmit and receive radios, and a data converter (A/D and D/A). During commissioning, the transmit and receive phased array is deployed from its stowed configuration to its full profile of 3.2 x 0.42 meters.

The power system for each XR satellite consists of a set of solar panels producing a 300W peak, and a Li-Poly battery pack. The battery pack has a 1.4 KWh capacity and a 30V nominal voltage.

The Attitude Determination and Control System ("ADCS") for each XR satellite consists of a GPS, Inertial Management Units, magnetometers, star trackers, torque rods, and reaction wheels, and is capable of achieving a pointing accuracy of less than +/- 0.1 degrees, and a GPS accuracy of less than 5 meters. During normal operations, the phased arrays will be Earth facing with look angles between 10 and 30 degrees relative to nadir. Phased arrays will be side looking with a 90-degree offset from the velocity vector.

Illustrations of the XR spacecraft are provided in the figures below, with text indicating the relevant dimensions as described above.

[4] In the event that the relevant details of an XR satellite falling within the scope of this application are expected to change, R2 Space will provide such information to the FCC.



Each XR satellite is equipped with a low thrust propulsion system that uses a solid metal propellant and produces a max delta V of 290 meters per second. During normal propulsive operations, the solid metal is heated and becomes the ion source; ions are then accelerated by an electric field to generate thrust. The XR satellite propulsion system does not include any volatile chemical propellants or pressurants. Propulsion will be utilized only for station-keeping and collision avoidance maneuvers, as R2 Space has no plans to perform any proximity or docking operations. As discussed in more detail below, in the unlikely event of a projected collision, R2 Space would have the ability to command the XR satellite to undertake an avoidance maneuver utilizing the propulsion system. During post-mission operations, the propulsion system will be powered off and rendered inert. There are no fluids or high-pressure vessels aboard the spacecraft, and the satellites do not contain any pyrotechnic devices or radioactive materials, further reducing any risk.

III. Assessment of Potential Spacecraft Debris, Breakups, Explosions and Collisions

A. Spacecraft Debris

Under no circumstances will the XR satellites release any objects at any time after launch. This constraint ensures that all XR satellites comply with the requirements of 4.3-1 and 4.3-2.

B. Breakups and Potential Explosions

R2 Space has conducted an in-depth analysis of all potential causes of spacecraft breakup during deployment and mission operations. R2 Space has no plans for any intentional breakup of any of the XR satellites, leaving accidental explosions as the only remotely possible cause of spacecraft breakup. Accordingly, the XR satellites are compliant with the requirements of 4.4-3 and 4.4-4.

R2 has identified the battery as the only component that has a isolated chance of causing accidental breakup of the XR spacecraft. Li-Poly battery cell failures are typically due to (1) overcharging the battery cells or (2) a short circuit external to the cells. R2 Space has conducted thorough assessments of each of these battery failure scenarios and has put rigorous mitigation strategies in place in order to ensure that the probability of accidental explosion is well below the 0.0005 threshold.

R2 Space has implemented solutions in compliance with requirement 4.4-1 that mitigate the risk of accidental breakup or explosion due to overcharging of the battery cells. First, the XR satellites include battery charge management systems that ensure that the entire battery voltage is maintained at or below the maximum allowable voltage. The voltage charge limits can be set by command while the spacecraft is on-orbit to allow for tailoring as necessary. Second, each battery cell is also equipped with a Current Interrupt Device ("CID") that, when activated, results in a disconnect of current flow within the cell. The CID is activated when a maximum pressure level is reached, and acts as a second check to prevent overcharging.

R2 Space has also implemented solutions to mitigate the risk of accidental breakup or explosion due to a short circuit external to the battery cell. Each cell is equipped with a Positive Temperature Coefficient ("PTC") Safety Device that protects the battery against short circuit conditions occurring outside the cell which can result in unsafe discharge currents and possible battery overheating. The PTC Safety Device is activated when a short is applied on a cell and the discharge current level increases, thereby causing the temperature of the PTC Safety Device to rise. When activated by these increased temperatures, the PTC Safety Device yields a resistance increase, effectuating a decrease in the discharge current. In this way, the PTC Safety Device mitigates the risk of unsafe discharge currents and potential battery overheating brought about by a short circuit.

C. End of Mission Passivation

At the End of Mission ("EOM"), R2 Space, through its Mission Operation Center ("MOC"), will command the XR satellites to discontinue station keeping and begin a decaying orbit. The R2 MOC will continue to maintain positive control of the XR satellites and will be ready to perform collision avoidance maneuvers if necessary. Once the XR satellites reach an altitude of 300 kilometers, and are no longer within the operational altitude of the International Space Station, the R2 MOC will command the satellites to deplete all onboard sources of energy and energy storage devices, in compliance with requirement 4.4-2. The XR satellite propulsion system utilizes solid metal propellants which require activation to become the ion source. The MOC command will cause the propulsion system to be powered off, rendering it inert. Similarly, the battery capacitor will be discharged and disconnected from the power source.

All ADCS will also be passivated, pursuant to MOC command. Both the magnetorquers and reaction wheels will be powered off and spun down, thereby removing all stored energy. Accordingly, the XR satellites satisfy requirements 4.4-2.

D. Potential for On-Orbit Collisions

R2 Space has utilized NASA's DAS to assess the probability of a collision with space objects larger than 10 centimeters in diameter, and found the probability of collision to be 0.00002.[5] This collision probability far surpasses the collision probability threshold of .001 as set forth in 4.5-1 and demonstrates that the XR satellites comply with these requirements. Even so, in the unlikely event of a projected collision, R2 Space is able to perform manual collision avoidance maneuvers, effectively eliminating any risk of on-orbit collisions.

Requirement 4.5-2 addresses the probability that a spacecraft will become disabled and unable to perform end-of-mission tasks, such as disposal maneuvers and passivation, due to collision with smaller space objects. The XR satellites have no critical components that are required for post mission disposal. As a result, the probability of a collision with space objects of sufficient size to that could prevent post-mission disposal of the spacecraft is 0. The XR satellites are therefore compliant with requirement 4.5-2.

IV. Assessment of Post-Mission Disposal and Reentry Hazards

A. Post-Mission Disposal Plan

Each XR satellite has an operational on-orbit lifetime of approximately 3 years. At the end of each satellite's operational life, the R2 Space MOC will command the satellite to

[5] R2 Space calculations are based on the underlying assumption that the XR satellite will have an operational altitude of 550 kilometers and an inclination angle of 97.7 degrees.

discontinue all station-keeping and begin a decaying orbit. R2 Space utilized NASA's DAS program to calculate the total orbital lifetime of the XR satellites. The DAS outputs show that each XR satellite will naturally decay 2.683 years after the discontinuation of station-keeping, resulting in a total orbital lifetime of 5.683 years. Said another way, the XR satellites will naturally de-orbit before the 6-year maximum without the need for propulsion. Due to the Low Earth Orbit ("LEO") network architecture, no systems or components are required to accomplish post-mission disposal before the 6-year mark. The XR satellites will be disposed of using the atmospheric reentry method, depending solely on atmospheric drag. The NASA DAS outputs demonstrate that the XR satellites comply with applicable requirements 4.6-1 and 4.6-4.

B. Reentry Hazards

R2 Space utilized NASA's DAS program to calculate the probability of objects surviving reentry and found that no individual components are expected to survive reentry. R2 Space utilized NASA's DAS program to run these calculations on each XR-1 component, and the DAS outputs for each component indicate that all individual components will demise at an altitude far above the earth; as such, no individual component will survive reentry.

Name	Parent	Qty	Material	Body Type	Thermal Mass	Diameter/Width	Length	Height	Demise Alt	Total DCA	KE
Backplate	1	1	Aluminum	Box	4.83	0.51	0.655	0.04	65.9	0	0
Side Frame	1	2	Aluminum	Flat Plate	2.82	0.63	0.655		69.2	0	0
Top Frame	1	1	Aluminum	Flat Plate	2.9	0.51	0.63		69.5	0	0
Bottom Frame	1	1	Aluminum	Flat Plate	1.03	0.51	0.63		75	0	0
X Frame	1	1	Aluminum	Flat Plate	0.47	0.51	0.655		76.7	0	0
Solar Panel	1	5	Aluminum	Flat Plate	1.74	0.51	0.63		72.9	0	0
Separation ring	1	1	Aluminum	Flat Plate	1.5	0.4	0.4		71.1	0	0
SAR Outer Wing Pane	1	2	Aluminum	Box	6	0.42	0.66	0.02	62.5	0	0
SAR Inner Wing Pane	1	2	Aluminum	Box	6	0.42	0.68	0.02	62.8	0	0
SAR Center Panel	1	1	Aluminum	Box	4.4	0.42	0.52	0.02	63.8	0	0
Thrusters	1	4	Aluminum	Box	1.8	0.1	0.1	0.09	60.2	0	0
RPU	1	1	Aluminum	Box	3.5	0.2	0.2	0.09	58.9	0	0
OBC1	1	1	Aluminum	Box	1.5	0.1	0.16	0.1	67.5	0	0
Watchdog	1	1	Aluminum	Box	0.53	0.14	0.19	0.03	72.6	0	0
PCM Lite	1	1	Aluminum	Box	0.4	0.1	0.21	0.02	73.3	0	0
PCM	1	1	Aluminum	Box	1.2	0.22	0.22	0.03	68.8	0	0
CDR Lite	1	1	Aluminum	Box	0.6	0.17	0.2	0.02	72	0	0
OBC2	1	1	Aluminum	Box	1	0.11	0.15	0.1	70.1	0	0
Contactor	1	1	Fiberglass	Cylinder	0.2	0.05	0.08		72.8	0	0
Coil	20	1	Iron	Cylinder	0.3	0.04	0.04		56.6	0	0
Battery	1	1	Aluminum	Box	3	0.22	0.39	0.13	70.7	0	0
Battery Pack	22	20	Fiberglass	Box	0.09	0.1	0.1	0.05	69.9	0	0
Battery Cell	23	160	Stainless S	Cylinder	0.045	0.018	0.065		64.6	0	0
ADCS	1	1	Aluminum	Box	0.5	0.1	0.1	0.05	69.9	0	0
Reaction Wheel	1	3	Aluminum	Box	0.85	0.12	0.12	0.04	66.5	0	0
MTQ	1	3	Iron	Cylinder	0.6	0.03	0.2		59.5	0	0
Star Tracker	1	2	Aluminum	Box	0.3	0.06	0.1	0.05	72.5	0	0
Upper Shelf	1	1	Aluminum	Flat Plate	0.8	0.47	0.48		75	0	0
Lower Shelf	1	1	Aluminum	Flat Plate	1	0.47	0.48		74.2	0	0

The DAS outputs demonstrate that the probability of human casualty is 0. Accordingly, the XR satellites comply with requirement 4.7-1.