Memorandum

To	*Federal Communications Commission*	
From	*Firefly Aerospace*	
Subject	*Mission Overview*	
Date	*12/16/2022*	
Alpha	*FRN Number:* *0028054328*	*STA File Number:* *2072-EX-ST-2022*

MISSION OVERVIEW

The purpose of the mission is to launch a payload under contract FA8818-20-D-0004 to the Department of Defense, administered by DCMA Dallas. The mission will be launched from SLC-2W at Vandenberg Space Force Base (VSFB). Launch parameters under the contract are variable due to the nature of the contract which is designed to test tactical response capabilities; orbits, payloads, and trajectories will be provided to Firefly at dates outlined in the contract. The launch contract Sample Orbit is 550km and an orbit list of 7 candidate orbits will be provided to Firefly on or about 17MAR2022. The contract restricts the inclination of the 7 candidate orbits to a range of 95-100 degrees. Telemetry from the vehicle will be transmitted for mission duration using 2215 MHz and a redundant downlink using 2272.5 MHz will be in use only during the period of Range Safety responsibility. Stage Two of the launch vehicle will downlink data to the VAFB Telemetry Receiving Station (VTRS) and Kongsberg Satellite Services (KSAT) ground station locations in Hawaii (Paumalu), Mauritius, and South Africa (Hartebeesthoek) over a period of less than 2 orbits. The entire mission is expected to be approximately two hours in duration.

The launch vehicle uses a traditional Flight Termination System (FTS) - ground-commanded initiation of the onboard ordnance, with additional failsafes, for the purpose of ending powered flight if necessary. The FTS will be armed just prior to launch and will not receive a ground commanded signal once the period of Range Safety responsibility has ended. The FTS will be inoperable after passivation.

Once the vehicle reaches the final orbit it will deploy any separable payloads. Stage Two will autonomously passivate after the final telemetry downlink – venting onboard propellant and gas, draining the stage's batteries, and ensuring there is no remaining source of energy available to the stage. All launch vehicle radios will automatically turn off at this point. Firefly anticipates no attached payloads for this mission. The passivation and RF control script for the vehicle is programmed into the control system and is autonomous. The launch vehicle does not include a command receiver; therefore, the RF communication link from the launch vehicle is not able to be controlled or turned off from the ground.