

This is a representative sample of an approved waiver application for 14 CFR § 107.51(a)

Description of Proposed Operation:

The purpose of the proposed operations is to test the flight capabilities of our fixed wing sUA. Some of this testing will require the sUA to be operated at speeds up to 125 MPH groundspeed (109 knots). The sUA used for these operations is a fixed wing aircraft with a wingspan of 4.5 feet and fuselage length of 3 feet. The sUA is equipped with 3 strobe lights, 1 white on top of the tail, 1 red on the left wingtip and 1 green on the right wingtip. These strobe lights have been tested to be visible for 5 statute miles under daylight clear sky conditions. Further details on the sUA are contained in our attached Operations Manual.

All flight operations will be conducted over our secured private use property. The property has a perimeter of 3 miles by 3 miles is surrounded by an 8-foot high security fence. Access to the area is through one guarded secured gate. For security and safety reasons, only pre-authorized personnel are allowed on site at all times. All personnel on-site are notified of the flight operations, and will be part of the support or flight crew for the operations. If they are not required for the flight operations, they will not be permitted to enter the inside of the secured and fenced area. The operations will be conducted from an area located near the center of the secured area. The flight operations area is entirely located in Class G airspace and the nearest airport is located 12 miles to the northwest. There are 3 structures located inside the secured area near the secure gate. These 3 structures are located 400 feet inside the secure perimeter and are not in the area of operations. The nearest structures (storage sheds) outside of the secure perimeter are located 2 miles from the perimeter of the operations area. The nearest residence is located 3 miles from the perimeter of the operations area. A Google Earth image of the surrounding area is attached with the secured area boundaries in yellow and the operations area boundaries in red.

All flight crews will consist of a minimum of a remote pilot in command (RPIC) at least two visual observers (VOs) and an additional VO that monitors a ground station. The VOs (other than the VO monitoring the ground station) will be positioned to have the ability to maintain visual line of sight of the sUA and the surrounding area at all times. All flight crew personnel on-site will have access to full duplex, hands free radio communications. The sUA is capable of providing the RPIC with the position, altitude, attitude, and direction of flight of the sUA via a screen on the controller. This information is also provided to the VO monitoring the ground station via a separate screen with a minimum diagonal dimension of 8". The sUA will operate at speeds at or below 125 MPH groundspeed (109 knots). The sUA will be operating in an area clear of any obstructions and the remote pilot and VOs will have clear VLOS on the sUA at all times. The sUA's flight path will be limited to a maximum altitude of 200 feet AGL and be within a 1200 foot radius of the RPIC and VOs. The sUA has geo-fence capabilities that will be set to limit the operation area boundaries to be no closer than ¾ mile to perimeter fencing. The sUA will have a pre-programmed failsafe function that will automatically

initiate in the event of a lost link. The function will be set so the engine shuts down and the sUA flight controls will be programmed to make the sUA enter a spin. The sUA will spin into the ground to terminate the flight. The operations area is a remote area (see area of operation description), there is little risk of the sUA injuring a person or property when executing a fail-safe descent.

All flight crew members will have been trained on all aspects of the operation in accordance with our attached Training Program Manual.

Prior to conducting operations, the RPIC will verify the following:

- Communication systems are fully operational;
- sUA pre-flight check of all systems has been accomplished in accordance with our Operations Manual;
- Geo-fencing perimeters are properly set;
- All flight crew members have been briefed to include the following:
 - Specific details on the route and duration of the operation;
 - Review of the emergency procedures from our Operations Manual;
 - Responsibilities of each VO to include:
 - Designated location for each VO;
 - Scanning of airspace and informing RPIC of clear airspace before takeoff and during operations.
 - VO monitoring the ground station to inform RPIC and all other flight crew of any discrepancies in flight telemetry and/or data signal strength.

At least 24 hours prior to operations a Notice to Airmen (NOTAM) will be filed. The NOTAM will include location, altitude, time, duration and nature of the activity. Further details on filing a NOTAM are included in our Operations Manual.