Ryan K. Koffman
12289 Daisy Court
Rancho Cucamonga, CA 91739-1921
November 13, 2014

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
Washington DC 20590

Re: Exemption Request Pursuant to Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from: 14 CFR 21 subpart H; 14 CFR 45.23(b); 14 CFR 61.113(a); 14 CFR 91.7(a); 14 CFR 91.9(b)(2); 14 CFR 91.103; 14 CFR 91.109; 14 CFR 91.119(c); 14 CFR 91.121; 14 CFR 91.151(a); 14 CFR 91.203 (a) and (b); 14 CFR 91.405 (a); 14 CFR 91.407 (a) (1) 14 CFR 91.409 (a)(1) and (2); 14 CFR 91.417(a) and (b)

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 CFR Part 11, Ryan K. Koffman, operator of Small Unmanned aircraft Systems ("sUAS"), hereby applies for an exemption from the listed Federal Aviation Regulations ("FARs") to allow commercial operation of its sUAS, so long as such operations are conducted within and under the conditions outlined herein or as my be established by the FAA as required by Section 333.

Commercial operation sUAS, as described herein, which are equipped with cameras and sensors, would operate in the following manner:

1. Aerial photography and/or video for public and/or private use including real estate, architecture, land surveying, engineering and other related professional activities.
2. Aerial video and/or photography for public and/or private use including television, public events, cinematography and news gathering.
3. Aerial inspection/photography of residential/commercial structures under contract with the owners or local government authority.
4. Aerial video/photography or providing live video feed to assist with search and rescue operations in cases of an emergency or natural disaster only when the local authorities or government has requested it by contract or donation.
5. The ability to offer training to persons individually or belonging to both private and/or public organizations that have interests in the use and application of sUAS for the purpose of the safe operation of sUAS to enhance the safety of the National Airspace System (NAS) as well as for the protection of the persons and property.

As described fully below, the requested exemption would permit the operation of sUAS under controlled conditions in the NAS that would be a) limited b) controlled c) predetermined and d) will provide safety enhancements to the already safe operations in the industry presently using conventional aircraft. Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's (the FAA Administrator's) responsibilities to "….establish requirements for the safe operation of such aircraft systems in the national airspace system."

The name and address of the applicant is:

Attn: Ryan K. Koffman
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Email: rcoconut@yahoo.com
Address: 12289 Daisy Court, Rancho Cucamonga, CA 91739-1921

Regulations from which the exemption is requested:

14 CFR Part 21 subpart H
14 CFR 45.23 (b)
14 CFR 61.113 (a)
14 CFR 91.7 (a)
14 CFR 91.9 (b) (2)
14 CFR 91.103
14 CFR 91.109
14 CFR 91.119 (c)
14 CFR 91.121
14 CFR 91.151 (a)
14 CFR 91.203 (a) & (b)
14 CFR 91.405 (a)
14 CFR 91.407 (a) (1)
14 CFR 91.409 (a) (2)
14 CFR 91.417 (a) & (b)

My sUAS are multi-rotor craft weighing no more than 55lbs. including payload. Under normal conditions they operate at speeds of no more than 50kts and have the ability hover and move along a vertical and horizontal plane simultaneously. They will operate in line of sight and will operate within a closed off and predetermined area owned and/operated by the property representative.

Given the small size of the sUAS and the controlled environment provided the proposed operations will adhere to the Reform Act's safety requirements. The approval of this application presents no national security issues. Regarding the level of safety surrounding the proposed operations and the public benefit, reduction in environmental impacts, including but not limited to reduced emissions and noise, the grant of

the requested exemption is in the public interest. Accordingly the applicant requests that the FAA grant the requested exemption with minimum delay.

AIRCRAFT AND EQUIVALENT LEVEL OF SAFETY

The operation limitations proposed for an equivalent or higher level of safety because operations will further enhance the safety of the persons and/or property using conventional aircraft.

These limitations and conditions to which the applicant agrees to adhere to when conducting commercial operations under the FAA issued exemption as set forth in the Flight Operations Manual (FOM) include:

1. The sUAS will weigh less than 55 lbs.
2. Flights will be operated within line of sight of a pilot and/or observer.
3. Maximum flight time for each operational flight will be 30 minutes. Flights will be terminated at 25% battery power reserve or 30 minutes of flight time whichever occurs first.
4. Flights will be operated at an altitude of no more than 400 feet Above Ground Level (AGL) and not more than 200 feet above an elevated platform from which filming is planned.
5. Minimum crew for each operation will consist of the sUAS Pilot, the Visual Observer (VO) and may include but not limited to a Camera Operator.
6. The sUAS pilot will be a designated Pilot in Command (PIC) and hold a current Third or higher Class Medical Certificate, along with a valid state driver's license. If the PIC feels another operator to be qualified with the necessary skills to be PIC & possess a Third or higher Class Medical and a valid state driver's license, that person may be designated PIC provided they have a minimum of 20 hours of flight time with the sUAS.
7. A briefing will be performed regarding the planned sUAS operations prior to each day's flight consisting of all the days' production activities.
8. The operator will file FAA Form 7711-1, or its equivalent, as modified in light of the requested exemption, with the appropriate local Flight Standards District Office (FSDO) no more than 72 hours but no less than 48 hours from planned operation.
9. The operator will obtain verbal/written consent of all persons involved with the planned operation and ensure that only consenting persons will be allowed within 100 feet of the flight operation, and the radius may be reduced to 30 feet based upon an equivalent level of safety determination, as required under the FOM. With the advanced permission of the FSDO, operations at closer range may be approved.
10. The PIC and VO will have been trained in operation of sUAS and receive up-to-date information for the particular sUAS to be operated.
11. The PIC and VO will be able to communicate by voice, radio, and/or text at all times.
12. Written and/or verbal permission and permits will be obtained from territorial, state, county or city jurisdictions, including law enforcement, fire or other appropriate governmental agencies.
13. If the sUAS loses communications or loses GPS signal, the sUAS will have the capability to return to a pre-determined location within a designated location and land autonomously.
14. The sUAS will have the capability to abort a flight in case of unpredicted obstacles, weather, or emergencies.

14 C.F.R. Part 21, Subpart H: Airworthiness Certificates 14 C.F.R. §91.203 (a) (1)

Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR §91.203 (a) (1). Given the size and limited operating area associated with the aircraft to be utilized by the Applicant, an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C.§44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular sUAS. In all cases, an analysis of these criteria demonstrates that the sUAS operated without an airworthiness certificate, in the restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

The sUAS to be operated hereunder is less than 55 lbs. fully loaded, carries neither a pilot nor passenger, carries no explosive materials or flammable liquid fuels, and operates exclusively within a secured and designated area. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator and under the requirements and in compliance with local public safety requirements. The FAA will have advance notice of all operations. These safety enhancements provide a greater degree of safety to the public and property owners than conventional operations conducted with airworthiness certificates issued under 14 C.F.R. Part 21, Subpart H. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the sUAS, due to its size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load.

14 C.F.R. § 45.23 (b). Marking of the Aircraft

The regulation requires:
When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

Even though the sUAS will have no airworthiness certificate, an exemption may be needed as the sUAS will have no entrance to the cabin, cockpit or pilot station on which the word “Experimental” can be placed. Given the size of the sUAS, two-inch lettering will be impossible. The word “Experimental” will be placed on the fuselage in compliance with §45.29 (f).

The equivalent level of safety will be provided by having the sUAS marked on its fuselage as required by §45.29 (f) where the pilot, observer and others working with the sUAS will see the identification of the sUAS as “Experimental.”

14 C.F.R. § 61.113 (a): Private Pilot Privileges and Limitations: Pilot in Command.

Pursuant to 14 CFR 61.113 (a), no person who holds a private pilot certificate may act as a pilot in command of an aircraft that is carrying passengers or property for compensation or hire. Our sUAS do not carry any pilots or passengers nor property therefore I am seeking an exemption to 14 CFR 61.113(a). Although helpful, a pilot's license will not ensure remote control piloting skills. The risks attendant to the operation of sUAS is far less than the risk levels inherent in the commercial activities outlined in 14 CFR 61. I feel the operation and limitations set forth in the FOM will equate to the safe operation of the sUAS.

14 C.F.R. §91.7(a): Civil Aircraft Airworthiness.

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft for maintenance and use of safety check lists prior to each flight an equivalent level of safety will be provided.

14 C.F.R. § 91.9 (b) (2): Civil Aircraft Flight Manual in the Aircraft.

Section 91.9 (b) (2) provides: No person may operate a U.S.-registered civil aircraft ... (2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof. The sUAS, given its size and configuration has no ability or place to carry such a flight manual on the aircraft, not only because there is no pilot on board, but because there is no room or capacity to carry such an item on the aircraft. The equivalent level of safety will be maintained by keeping the flight manual at the ground control point where the pilot flying the sUAS will have immediate access to it.

14 C.F.R. § 91.103: Preflight Action.

This regulation requires each pilot in command to take certain actions before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be provided for the aircraft an exemption will be needed. The PIC will take all actions including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data before initiation of flight.

14 C.F.R. §91.109: Flight Instruction.

Section 91.103 provides that no person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls. sUAS and remotely piloted aircraft, by their design do not have fully functional dual controls. Flight control is accomplished through the use of a control box that communicates with the aircraft via radio communications. The FAA has approved exemptions for flight training without fully functional dual controls for a number of aircraft and for flight instruction in experimental aircraft. The equivalent level of safety provided by the fact that neither a pilot nor passengers will be carried in the aircraft and by the size and speed of the aircraft.

14 C.F.R. §91.119: Minimum Safe Altitudes.

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119 (d) allows helicopters to be operated at less than the minimums prescribed, provided the person operating the helicopter complies with any route or altitudes prescribed for helicopters by the FAA. As this exemption is for a sUAS that is a helicopter and the exemption requests authority to operate at altitudes up to 400 AGL, or not more than 200 above an elevated platform from which filming is planned, an exemption may be needed to allow such operations. As set forth herein, the sUAS will never operate at higher than 400 AGL with the exception that in circumstances where the sUAS is used to survey or photograph a structure whose height exceeds 400 feet AGL, the sUAS will not be operated more than 100' above the highest point on the structure. It will however be operated in a restricted area with security perimeter, where buildings and people will not be exposed to operations without their pre-obtained consent.

The equivalent level of safety will be achieved given the size, weight, speed of the sUAS as well as the location where it is operated. No flight will be taken without the permission of the property owner or local officials. Because of the advance notice to the property owner and participants in the filming activity, all affected individuals will be aware of the planned flight operations. Compared to flight operations with aircraft or rotorcraft weighting far more than the maximum 55lbs. proposed herein and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented with conventional aircraft operating at or below 500 AGL. In addition, the low-altitude operations of the sUAS will ensure separation between these small- UAS operations and the operations of conventional aircraft that must comply with Section 91.119.

14 C.F.R. §91.121 Altimeter Settings.

This regulation requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "...to the elevation of the departure airport or an appropriate altimeter setting available before departure." As the sUAS may not have a barometric altimeter, but instead a GPS altitude read out, an exemption may be needed. An equivalent level of safety will be achieved by the operator, pursuant to the safety check list and live flight data monitoring, confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

14 C.F.R. § 91.151(a): Fuel Requirements for Flight in VFR Conditions

Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed – (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes."

The battery powering the sUAS provides approximately 30 minutes of powered flight. To meet the 30 minute reserve requirement in 14 CFR §91.151, sUAS flights would be limited to approximately 10 minutes in length. Given the limitations on the sUAS's proposed flight area and the location of its proposed operations within a predetermined area, a longer time frame for flight in daylight or twilight VFR conditions is reasonable.

Applicant believes that an exemption from 14 CFR §91.151(a) falls within the scope of prior exemptions. Operating the small UAS, in a tightly controlled area where only people and property owners or official

representatives who have signed waivers will be allowed, with less than 30 minutes of reserve fuel, does not engender the type of risks that Section 91.151(a) was intended to alleviate given the size and speed of the small UAS. Additionally, limiting sUAS flights to 10 minutes would greatly reduce the utility for which the exemption will be granted. Applicant believes that an equivalent level of safety can be achieved by limiting flights to 30 minutes or 25% of battery power— whichever happens first. This restriction would be more than adequate to return the sUAS to its planned landing zone from anywhere in its limited operating area.

14 C.F.R. §91.203 (a) and (b): Carrying Civil Aircraft Certification and Registration

The regulation provides in pertinent part:

(a) Except as provided in § 91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate. . . .

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

The sUAS fully loaded weighs no more than 55 lbs. and is operated without an onboard pilot. As such, there is no ability or place to carry certification and registration documents or to display them on the sUAS.

An equivalent level of safety will be achieved by keeping these documents at the ground control point where the pilot flying the sUAS will have immediate access to them, to the extent they are applicable to the sUAS.

14 C.F.R. §91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections.

These regulations require that an aircraft operator or owner "shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter...," and others shall inspect or maintain the aircraft in compliance with Part 43.

Given that these section and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to the applicant. Maintenance will be accomplished by the operator pursuant to the flight manual and operating handbook. An equivalent level of safety will be achieved because these small UASs are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the sUAS can land immediately and will be operating from no higher than 400 feet AGL. The operator will ensure that the sUAS is in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety.

An equivalent level of safety will be achieved because maintenance and inspections will be performed in accordance with the sUAS Manufacturer's Manual, as referenced in the Aircraft Operations Manual (AOM). As

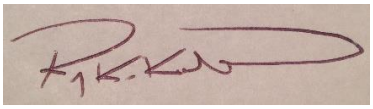
provided in the FOM, the operator will ensure that the sUAS is in working order prior to initiating flight and perform required maintenance needed.

Additional Information

The applicant, Ryan K. Koffman, has been involved in the building and piloting of remote controlled aircraft for more than 10 years. Also the primary pilot, Ryan K. Koffman, is an FAA Commercial Licensed Airline Transport Pilot with a First Class Medical.

Satisfaction of criteria provided in Section 333 of the Reform Act of 2012 provide more than adequate justification for the grant of the requested exemptions allowing the commercial operation of the applicant's sUAS.

Sincerely,



Ryan K. Koffman