January 9, 2015

Federal Aviation Administration:

On behalf of Birdseye Video, LLC (DBA “BirdsiVideo”) I would like to formally submit for an exemption from part 21, subpart H; and Sections 45.23(b), 91.7(a), 91.9(b)(2), 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR). This proposed exemption would allow our operation of unmanned aircraft systems (UAS) for the purpose of aerial videography and to augment real estate listing videos in various metropolitan areas.

As found in Exemption No. 11138 (Trudeau), the FAA recently approved similar use of a PHANTOM 2 UAS.

We will operate a UAS, the DJI PHANTOM 2, which is comprised of an unmanned aircraft (UA or PHANTOM), an attached GoPro Hero 3+ camera and a transportable ground station.

The PHANTOM 2 is a quad-copter with a maximum gross weight of about 3 pounds. It is equipped with four rotors that are driven by electric motors powered by batteries. The UA has a maximum airspeed of 30 knots. We will operate the UA over various metropolitan areas, primarily around Indianapolis, IN, to enhance academic community/ business awareness and augment real estate listing videos.

UAS Operating Parameters

We will abide by the following additional operating conditions under this exemption, which ensures a level of safety at least equal to existing rules:

• operate UAS below 300 feet and within a radius distance of 1000 feet from the controller to aid in direct line of sight visual observation;

• obtain permission from the owner/controller of any vessels, vehicles and structures when operations may be conducted closer than 500 feet to any such vessels, vehicles or structures; we will conduct a safety assessment of the risk of operating closer to those objects and determine that it does not present an undue hazard;

• operate the UAS for 5-10 minutes per flight;

• land UAS prior to the manufacturer’s recommended minimum level of battery power;

• operate UAS during daylight hours only within visual line of sight (VLOS);

• use the UAS' global positioning system (GPS) flight safety feature whereby it hovers and then slowly lands if communication with the remote control pilot is lost;

• conduct all operations under the flight safety protocols (including posting a warning sign reading: "Attention Aerial Photography in Progress – Remain Back 150 feet") contained in the operating documents and will actively analyze flight data and other sources of information to constantly update and enhance safety protocols;

• contact respective airports if operations will be within 5 miles to advise them of his estimated flight time, flight duration, elevation of flight and other pertinent information;

• always obtain all necessary permissions prior to operation;

• have procedures in place to abort flights in the event of safety breaches or potential danger;

• only operate in safe environments that are strictly controlled, are away from power lines, elevated lights, airports and densely populated areas (defined by areas depicted in "yellow" on VFR charts and through obtaining information regarding congested areas from the local Flight Standards District Office (FSDO);

• conduct extensive preflight inspections and protocols, during which safety carries primary importance (reference PHANTOM Flying Flow Chart and User Manual).

UAS Pilot in Command (PIC)

Josh Kneifel, our Chief Pilot, holds a FAA Commercial Pilot license, first-class medical certificate, multi-engine instrument rating, is a former Certified Flight Instructor and has substantial flight time in numerous types of aircraft. Given his flight background and experience, he has the knowledge required to ensure the high level of safety required by current regulations. Any other pilots who would conduct flights will hold a minimum of a FAA Private Pilot License and third-class medical.

Regarding UAS operational training, we have flown numerous practice flights in remote areas as hobbyists simulating flights for future commercial use to gain familiarization with the characteristics of the UAS' performance under different temperature and weather conditions.

Any PIC operating our UAS will have accumulated and logged, in a manner consistent with 14 CFR 61.51(b), 25 hours of total time as a UAS rotorcraft pilot including at least 10 hours logged as a UAS pilot with a multi-rotor UAS. The PIC will also have accumu-

lated and logged a minimum of 5 hours as a UAS pilot operating the same make and model of UAS to be used for operations. In addition to the hour requirements, the PIC will accomplish 3 take-offs and landings in the preceding 90 days (for currency purposes) prior to any flight.

Specific Exemptions Requested

Given the size, weight, speed, and limited operating area associated with the UA, we feel an exemption from 14 CFR part 21, Subpart H (Airworthiness Certificates) and § 91.203(a) and (b) (Certifications required), subject to certain conditions and limitations, is warranted and meets the requirements for an equivalent level of safety under 14 CFR part 11 and Section 333 of P.L. 112-95 (Section 333).

We request an exemption from § 45.23 Marking of the aircraft because the UA will not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, the two-inch lettering is difficult to place on such a small aircraft with dimensions smaller than the minimal lettering requirement. Regardless of this, we can mark the UAS in the largest possible lettering by placing the word “Experimental” on its fuselage as required by § 45.29(f) so that anyone will see the markings.

We request an exemption from § 91.7(a) which prohibits the operation of an aircraft without an airworthiness certificate, since there is currently no certificate applicable to our operation, this regulation is inapplicable.

We request an exemption from §§ 91.405(a), 91.407(a)(1), 91.409(a)(2) and 91.417(a) and (b) Maintenance inspections since they only apply to aircraft with an airworthiness certificate. However, as a safety precaution we will perform a preflight inspection of the UAS before each flight as outlined in the attached operating documents.

We request an exemption from § 91.9(b)(2) which requires an aircraft flight manual in the aircraft, however since there are no pilots or passengers on board the aircraft and given its size, this regulation is inapplicable. We believe an equivalent level of safety will be achieved by maintaining a safety/flight manual with the UAS ground station.

We request an exemption from § 91.119 which prescribes safe altitudes for the operation of civil aircraft, but it allows helicopters to be operated at lower altitudes in certain conditions. We will not operate our UAS above the altitude of 300 feet above ground level (AGL) and will also only operate in safe areas away from the public and traffic, thus “providing a level of safety at least equivalent to or below those in relation to minimum safe altitudes.” Given the size, weight, maneuverability, and speed of the UAS, an equivalent or higher level of safety will be achieved.

We request an exemption from § 91.121 Altimeter settings as it is inapplicable since the UAS utilizes electronic GPS with a barometric sensor.

We request an exemption from § 91.151(a) Fuel requirements for flight in VFR conditions. The UAV is 100% electric and two low battery alerts are issued - per the operating documents, the UAV will be landed at the first alert. Also, our flights will last only 5-10 minutes each, and the UAS has an automated function which results in immediate landing when a low battery is detected. The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough power to fly to the first point of intended landing and, assuming normal cruising speed, land the UA with 30% battery power remaining.

Public Interest

Aerial videography for geographical awareness and for real estate marketing has been around for a long time through manned fixed wing aircraft and helicopters, but for small business owners, its expense has been cost-prohibitive. By granting this exemption we would be able to provide this service at a much lower cost. Further, our small UAS will pose no threat to the public given its small size and lack of combustible fuel when compared to larger manned aircraft. Additionally, the operation of our UAS will minimize ecological damage and promote economic growth by providing information to companies looking to relocate or build in the metro areas we service.

Summary

We will comply with all of the following conditions and limitations should this grant of exemption be provided:

1) Operations will be limited to the following aircraft described in the operating documents which is a quad-rotor aircraft weighing less than 3 pounds: PHANTOM 2 Unmanned Aircraft System.

2) The UA will not be flown at an indicated airspeed exceeding 30 knots.

3) The UA will be operated at an altitude of no more than 300 feet above ground level (AGL), as indicated by the procedures specified in the operating documents. All altitudes reported to ATC must be in feet AGL.

4) The UA will be operated within visual line of sight (VLOS) of the Pilot In Command (PIC) at all times.

5) All operations will utilize a visual observer (VO). The UA will be operated within the visual line of sight (VLOS) of the VO at all times. The VO and PIC will be able to communicate verbally at all times. The PIC will be designated before the flight and will not transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions prescribed in the operating documents.

6) The operating documents will be accessible during UAS operations and made available to the Administrator upon request. Any revisions to the operating documents will be presented to the Administrator upon request.

7) Prior to each flight, the PIC will inspect the UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAS, the UAS will not be operated until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight. The Ground Control Station will be included in the preflight inspection. All maintenance and alterations will be properly documented in the aircraft records.

8) Any UAS maintenance or alterations that affect the UAS operation or flight characteristics, e.g. replacement of a flight critical component, will undergo a functional test flight. The PIC who conducts the functional test flight will make an entry in the aircraft records.

9) The pre-flight inspection section in the operating documents will account for all discrepancies, i.e. inoperable components, items, or equipment, not already covered in the relevant sections of the operating documents.

10) We will follow the UAS manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.

11) We will carry out maintenance, inspections, and record keeping requirements, in accordance with the operating documents. Maintenance, inspection, and alterations will be noted in the aircraft records, including total flight hours, description of work accomplished, and the signature of the authorized person returning the UAS to service.

12) Each UAS operated will comply with all manufacturer Safety Bulletins.

13) An authorized person will make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.

14) UAS operations will be conducted by a PIC possessing at least a private pilot certificate and at least a current third-class medical certificate. The PIC will also meet the flight review requirements specified in 14 CFR 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

15) Prior to operations conducted for the purpose of aerial videography/cinematography and augmenting real estate listing videos (or similar operations), the PIC will have accumulated and logged, in a manner consistent with 14 CFR 61.51(b), a minimum of 25 hours of total time as a UAS rotorcraft pilot including at least 10 hours logged as a UAS pilot with a multi-rotor UAS.

16) Prior to operations conducted for the purpose of aerial videography/cinematography and augmenting real estate listing videos (or similar operations), the PIC will have accumulated and logged, in a manner consistent with 14 CFR 61.51(b), a minimum of 5 hours as UAS pilot operating the make and model of the UAS to be used in operations. The PIC will accomplish 3 take-offs and landings in the preceding 90 days (for currency purposes).

17) The PIC will not operate the UAS for the purpose of aerial videography/cinematography and augmenting real estate listing videos (or similar operations), unless the PIC has demonstrated and logged in a manner consistent with 14 CFR 61.51(b), the ability to safely operate the UAS in a manner consistent with the operating documents, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

18) UAS operations will not be conducted during night, as defined in 14 CFR 1.1. All operations will be conducted under visual meteorological conditions (VMC).

19) The UA will not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart.

20) The UA will not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

21) If a UA loses communications or loses its GPS signal, it will return to a predetermined location within the planned operating area and land or be recovered in accordance with the operating documents.

22) The PIC will abort a flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.

23) The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough power to fly at normal cruising speed to the intended landing point and land the UA with 30% battery power remaining.

24) We will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations, and also request a Notice to Air-

man (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.

25) Before conducting operations, the radio frequency spectrum used for operation and control of the UA will comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

26) The documents required under 14 CFR 91.9 and 91.203 will be available to the PIC at the Ground Control Station of the UAS any time the UAS is operating. These documents will be made available to the Administrator or any law enforcement official upon request.

27) The UA will remain clear and yield the right of way to all manned aviation operations and activities at all times.

28) The UAS will not be operated by the PIC from any moving device or vehicle.

29) The UA will not be operated over congested or densely populated areas.

30) Flight operations will be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:

a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. We will ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately and/or;

b. The aircraft is operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard, and;

c. Operations nearer to the PIC, VO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).

31) All operations will be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

32) Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA will be reported to

the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents will be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.