U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

July 24, 2015

Exemption No. 12142
Regulatory Docket No. FAA–2015–1598

Mr. Keith Whitehead
President, Co-Owner
4Prop Production
25951 Timberline Drive
San Antonio, TX 78260

Dear Mr. Whitehead:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated May 4, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of 4Prop Production (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial surveying, photography, videography, inspections, monitoring, and filmmaking.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner are the Phantom 3 and 3D Robotics IRIS+.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in

consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, 4Prop Production is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, 4Prop Production is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the Phantom 3 and 3D Robotics IRIS+ when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents,

the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must 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.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may 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.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must 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. The operator must 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 in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects 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.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

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

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on July 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

Date: May 4th 2015

T0: U.S. Department of Transportation

Doket Management System

1200 New Jersey Ave, SE

Washington, DC 20590

From: Keith Whitehead (4Prop Production)

25951 Timberline Dr

San Antonio, Texas 78260

(210-639-5659)

Keithw124@gmail.com

RE: Exemption Request under Section 333 of the FAA Modernization and Reform Act of 2012 and 14 C.F.R. Part 11

To whom it may concern:

Our Company, **4Prop Production** is requesting exemptions from the regulations listed below until the FAA addresses and redefines the use and regulations of sUAV for commercial operations.

I, Keith W Whitehead, President and co-owner of 4Prop Production have been a FAA licensed Private Pilot for 7 years and have logged 200 hours of PIC and experience in single engine aircraft without incident and have been committed to safety with each flight. FAA Private Pilot certificate # 3353460. I have been also flying remote control aircraft line of sight for 33 years and a member of Academy of Model Aeronautics (AMA), I have been involved in Law Enforcement for the last 22 years along with my business partner Jay E Krick. We are professionally aware of citizens right to privacy and the importance of public safety.

We are requesting that 4Prop Production an owner and operator of a small unmanned aircraft, be exempted from the Federal Aviation Regulation listed below so that 4Prop Production, may operate a UAS commercially in Class G airspace regulated by the Federal Aviation Administration.

The exemption request will permit 4Prop Production to operate UASs commercially for the purpose of filming and photographing property, people, and events. 4Prop Production will provide a service that is beneficial to an industry that is already using, and seeking to use, UASs for these purposes with a legal and safe option while providing relevant experience and information to the FAA and the UAS community. This will benefit the public with the controlled operation of UASs by 4Prop Production and increased integration into the National Airspace System.

All operations by 4Prop Production will strictly adhere to safety, applicable FARs, Operator's Handbook, and all other guidelines from the FAA. 4Prop Production will, at all times, conduct operations in a manner as to maintain the same level of safety as current manned aircraft operations.

4Prop Production will operate exclusively in controlled conditions, within visual line of sight "VLOS", at low altitudes of 400 feet above ground level. Any UAS in operation by 4Prop Production will not exceed 55 lbs. weight according to regulation. At all times 4Prop Production will have a Chief Pilot responsible to maintain safe operations, ensure current requirements are met and consistently assure an open line of communication with the FAA.

The substance of this request is essentially the same as that granted to:

Exemption No. 11419 in that NMotion UAS is committed in public safety, as well as, aerial photography and inspection of structures

Exemption No. 11434 in that David Voyles operating an Aerial Photography business in Real Estate.

Exemption No. 11423 In That Stunning Heights LLP using small unmanned aircraft commercially to film and photograph people, property and events.

Exemption No. 11430 in that Aerial Optics commercially conducts aerial photography and videography

I. **Exemption Request** :
Under Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 C.F.R. Part 11, the following regulations:

14 C.F.R. Part 21
14 C.F.R. 45.23 (b)
14 C.F.R. 91.7 (a)
14 C.F.R. 91.119
14 C.F.R. 91.121
14 C.F.R. 91.151(a)
14 C.F.R. 91.203 (a) & (b)
14 C.F.R. 91.405
14 C.F.R. 91.407
14 C.F.R. 91.409
14 C.F.R. 91.417
14 C.F.R. 91.109
14 C.F.R. 91.215

Keith W Whitehead President and Jay E Krick Vice President of 4Pro Production is petitioning for exemption to enable 4Pro Production to operate a 3DR Robotics IRIS+ quad copter (see Appendix A) utilizing the 3DR pixhawk flight controller. A DJI Phantom 3 Professional quad copter (see Apepedix B).

Both sUASs will be equipped with cameras, camera stabilizing gimbals and OSD (on screen displays) providing the Pilot in command (PIC) with altitude, airspeed, battery life and direction. Our UAS flight controllers utilize GPS to limit the altitude above the ground and limit the radius of the distance it flies from the PIC. Our UASs have GPS guided failsafe functions allowing the autopilot system to fly back to the launch site autonomously. If the transmitter is disconnected the system will automatically trigger return to home and will land safely.

Our commercial activities would include:

- Aerial surveying
- Event photography/videography
- Real estate photography
- Aerial filmmaking and photography
- Unmanned aerial sightseeing
- Construction site inspections and monitoring
- Building inspections

PILOT IN COMMAND AND OBSERVER QUALIFICATIONS AND DUTIES

The PIC will maintain at minimum a FAA Sports Pilot Certificate and a current vaild state drivers license. The PIC will have at least 40 hours total time and at least 20 hours flying Radio Controlled Aircraft of which will be 10 hours flying sUAS. The PIC is responsible for the safe and efficient operation of the aircraft. Specific duties include all preflight preparation, in flight operation and post flight requirements

. Procedures including but not limited to:

- Safe flight operations and weather conditions
- Risk assessment and mitigation to persons and property
- Site suitability

The Observer must have the visual acuity to observe the sUAS and be able to communicate clearly with the PIC verbally or with 2 way radios.

The Observers duties are;

- Notifying the PIC of any impending obstacles in the flight path of the sUAS.
- Notifying the PIC of any deviations in the planned flight path of the sUAS
- Notifying the PIC if unauthorized persons enter the area of the planned flight
- Maintaining a restricted area for launch and recovery of UAS

GENERAL OPERATING STANDARDS

- Before an operation of a sUAS within 5NM of an airport with a control tower, the control tower will be called to gain permission to operate the sUAS. The PIC will give the position, altitude and the times the sUAS will be operated. The sUAS will not be operated at an altitude of over 200 feet AGL.
- Before an operation of a sUAS within 5NM of a non-tower controlled, airport operators will be notified and the PIC will give the right of way to avoid flying in the proximity of full-scale aircraft. At no time will the sUAS be operated within the final approach course and the takeoff course of any runway. The sUAS will not be operated at an altitude of over 200 feet AGL.
- Weather minimums will be 3 miles visibility and a 1000 foot ceiling
- 4Prop Production will only operate its sUAS in line of sight of a PIC and/or observer and will operate at sites that are a 'sufficient distance' from populated areas. Such operations will insure that the sUAS will not create a hazard to users of the national airspace system or the public.
- Maximum flight time for each operational flight will be between 15 and 25 minutes.
- Flights will be terminated at 25% battery power reserve should that occur prior to the 25 minute limit. Which is displayed by the on screen display.
- The sUAS will be programmed into the flight controller not to fly at an altitude of no more than 200 feet AGL
- Minimum crew for each operation will consist of the sUAS Pilot in Command and Visual Observer.
- The sUAS operated by the petitioner weighs less than 55 pounds, including the payload (i.e. camera, lens, and gimbals).
- The sUAS will operate at speeds of no more than 40 knots, can hover, and can simultaneously move vertically and horizontally.
- Operations will be restricted to flights over public or private property without the permission of the property owner(s)
- sUAS will not be operated over densely populated areas or a assembly of people.
- sUAS will not be operating over heavily trafficked roads and highways.

HOW THIS REQUIST IS TO THE BETTERMENT OF OUR COMMUNITY

Our UAS are powered by batteries, smaller, lighter and more maneuverable than larger aircraft running on combustible fuel, it operates at lower altitudes with no people on board and will thereby reduce current risk levels associated with traditional aircraft, enhance safety and diminish the likelihood of death or serious bodily injury. Also with a small payload and typical flight time of 15 to 25 minutes, there is no risk to national security. Low level photos and video are far more effective than ground or high altitude manned aircraft imagery for displaying detailed characteristics of ground based objects.

Additionally, we will make our sUAS available to first responders in our community who might require assistance, including fire fighters, police, search and rescue efforts, while remaining subject to all limitations cited in this application.

EXEMPTION REQUEST AND EQUIVALENT LEVEL OF SAFETY

4Prop Production respectfully requests an exemption from the following regulations as well as and additional regulations that may technically apply to the operation of its UASs:

14 CFR Part 21, Airworthiness Certificates:

This part establishes the procedures for the issuance of an airworthiness certificate. While the FAA continues to work to develop airworthiness standards for Unmanned Aerial Systems, we request an experimental certificate be issued for our UAS's under either or both of the following provisions: 21.191 Experimental certificates. Experimental certificates are issued for the following purposes

: (a) Research and development. Testing new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft.

(b) Showing compliance with regulations. Conducting flight tests and other operations to show compliance with the airworthiness regulations including flights to show compliance for issuance of type and supplemental type certificates, flights to substantiate major design changes, and flights to show compliance with the function and reliability requirements of the regulations. Since the experimental certificate can be used for commercial purposes such as market surveys, sales demonstrations, and customer crew training, we would expect that an experimental certificate would permit our commercial purpose as well. The aircraft will not carry persons or property, will not carry fuel, and will only fly under strict operational requirements. Combined with the UAS lightweight, being constructed primarily of carbon fiber and plastic in conjunction with the ability to utilize emergency parachute systems.

We at 4Prop Production propose that the UAS will be at least as safe, if not safer, than a conventionally certificated aircraft performing the same mission. If an experimental airworthiness certificate is not appropriate for this application, then we request an exemption of 14 CFR Part 21, Subpart H, and the

requirement for an airworthiness certificate in general, citing the equivalent level of safety outlined in the previous paragraph.

14 CFR 45.23 Display of marks; general and 45.29 Size of marks:

These regulations provide that each aircraft must display "N" and the aircraft's registration number in letters at least 3 inches high. Additionally, the aircraft must display the word "EXPERIMENTAL" in letters at least 2 inches high near the entrance to the cabin, cockpit, or pilot station. The sUAS does not have an entrance in which the word "EXPERIMENTAL" can be placed, and may not have a registration number assigned to it by the FAA.

The size of the sUAV in use (IRIS+ and the DJI Phantom 3 pro) does not allow for the designated size of the registration numbers that are referred to in this regulation; however, we would certainly adhere to adding registration numbers to the sUAV in an appropriate manner (largest possible characters). I donot believe at this time, registration numbers will be issued and this regulation may not be applicable.

14 CFR 91.7 Prohibits the Operation of an aircraft without an airworthiness certificate:

As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

91.119 Minimum safe altitudes:

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:
(a)Anywhere. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
(b)over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
(c)Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.
(d)Helicopters, powered parachutes, and weight-shift-control aircraft. If the operation is conducted without hazard to persons or property on the surface—
(1) A helicopter may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section, provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA; and
(2) A powered parachute or weight-shift-control aircraft may be operated at less than the minimums prescribed in paragraph (c) of this section.

It is in the best interest of the public that maximum altitudes are the relevant factor and not minimum altitude. We are seeking to cap our altitude to 200 feet AGL since we deem that altitude is satisfactory to obtain the necessary aerial data, photography and videography information for most properties in our geographical area. Emergency situations of a sUAS is unlike fixed wing aircraft or helicopters and we do not believe that these regulations are applicable to our request. All our flights will be pre-planned, land or property owners notified as well as any local police. All non-participants will be required to maintain a distance of 500 feet at all times.

CFR 91.121 Altimeter settings:

The regulation requires that aircraft shall maintain cruising altitudes by reference to an altimeter setting available within 100 NM of the aircraft. The sUAS will always fly below 200 feet AGL and will not need to maintain cruising altitudes in order to prevent conflict with other aircraft. An Above Ground Level altimeter measurement above the takeoff point is transmitted via radio from the sUAS on-board computer to the display screen held by the PIC, providing a constantly updated AGL readout. Regarding altimeter settings is inapplicable insofar as our UAS utilizes electronic global positioning systems with a barometric sensor

14 CFR 91.151 Fuel requirements for flight in VFR conditions:

(a) No person may begin 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.

All flights will be performed in good visible conditions since quality photography depends upon favorable lighting, visibility and wind conditions. Because of the light weight nature of the DJI Phantom 3 and the 3DR IRIS+ it is essential even with the use of a gimbal to fly fn favorable conditions. The Batteries in use have approximately 15 to 25 minutes of battery life but deem it necessary to assure safety to replace battery after 15 minutes of flight time (approx. 25% remaining). Most photographic projects will be completed within 20 to 30 minutes.

14 CFR 91.203(a) & (b) Civil aircraft: Certifications required:
(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. Each U.S. airworthiness certificate used to comply with this subparagraph (except a special flight permit, a copy of the applicable operations specifications issued under § 21.197 c of this chapter, appropriate sections of the air carrier manual required by parts 121 and 135 of this chapter containing that portion of the operations specifications issued under § 21.197 c or an authorization under § 91.611) must have on it the registration number assigned to the aircraft under part 47 of this chapter . However, the airworthiness certificate need not have on it an assigned special identification number before 10 days after that number is first affixed to the aircraft. A revised airworthiness certificate having on it an assigned special identification number, that has been affixed to an aircraft, may only be obtained upon application to an FAA Flight Standards district office.
(2) An effective U.S. registration certificate issued to its owner or, for operation within the United States, the second copy of the Aircraft registration Application as provided for in § 47.31 c or a registration certification issued under the laws of a foreign country.
(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.

It is not practical or possible for a lightweight sUAS to carry certification and registration papers. There is no physical cockpit to display such documents and we therefore see that this is inapplicable; however, we deem it necessary to have our business identification and tax registration as well as any exemption that we hope to receive from the FAA available at any flight location that we are actively engaged.

14 CFR Subpart E (91.401- 91.417) -Maintenance, Preventive Maintenance, Alterations:
The above-cited Regulations require, amongst other things, aircraft owners and operators to "have [the] 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. . . ."

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply 4Prop Production UAS's. However, as a safety precaution we inspect our UAS before and after each flight.

14 CFR 91.109 Flight Instruction; Simulated instrument flight and certain flight tests:
(a) 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. However, instrument flight instruction may be given in an airplane that is equipped with a single, functioning throw over control wheel that controls the elevator and ailerons, in place of fixed, dual controls, when:
(1)The instructor has determined that the flight can be conducted safely; and
(2)The person manipulating the controls has at least a private pilot certificate with appropriate category and class ratings.
Because of the nature of sUAV, it is not possible to secure dual controls; however, since the DJI Phantom 3 and IRIS+ does have a home lock if loss of control occurs, the unit will return to starting point safely. When battery power is low, the DJI Phantom 3 and IRIS+ will also return to home base. We believe this regulation may be in applicable.

14 C.F.R. 91.215 ATC transponder and altitude reporting equipment and use:
This regulation states all aircraft operating within 30 nautical miles of class A, B and C airspace must be equipped with automatic pressure altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations.

Due to the small size and lifting capabilities of our UASs we cannot carry a traditional transponder. All of our operations will be under 200 feet AGL if we are operating within the 30mi reach of a mode c vail.

IN CONCLUSION:

In conclusion we refer you to all the arguments and safety precautions stated above and sincerely hope that the FAA administrators sees that our Company will practice safety procedures and take all precautions necessary to incorporate our sUAS into the National Airspace in such a manner that it will not jeopardize general aviation and public safety. We at 4Prop Production hope that the FAA will allow us to pursue commercial services within the community and to conduct aerial data collection and photography.

Sincerly,

Keith W Whitehead
4Prop Production

Appendix A

See Attached Files:
Phantom 3 Professional User manual .PDF

IRIS- Plus Operational Manual.PDF