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

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

July 30, 2015

Exemption No. 12240
Regulatory Docket No. FAA–2015–2030

Mr. Les Valsquier
Principle
Freeborn Concepts LLC, dba RealSkyPics
1125 300th Street NW.
Stanwood, WA 98292

Dear Mr. Valsquier:

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 18, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Freeborn Concepts LLC, dba RealSkyPics (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial videography and photography.

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 DJI Phantom 2 Vision+ and DJI Phantom 3.

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 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, Freeborn Concepts LLC, dba RealSkyPics 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, Freeborn Concepts LLC, dba RealSkyPics 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 DJI Phantom 2 Vision+ and DJI Phantom 3 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

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18 May, 2015

U.S. Department of Transportation
Federal Aviation Administration
Docket Management System
Shell Docket FAA-2007-0001

RE: Exemption Request Section 333 of the FAA Reform Act of 2012

Attachments:
1) Phantom 2 Vision+ User Manual (EN) v1.8
2) Phantom 2 Vision+ Pilot Training Guide (EN) v1.1

References**:**
1) FAA Exemption No. 11138, Regulatory Docket No. FAA-2014-0481 in the matter of the petition of DOUGLAS **TRUDEAU**
2) FAA Exemption No. 11136, Regulatory Docket No. FAA–2014–0508 in the matter of the petition of **ADVANCED AVIATION** SOLUTIONS LLC
3) FAA Exemption No. 11395 Regulatory Docket No. FAA-2015-0162 in the matter of petition of **STRAW** Investment Group LLC
4) FAA Exemption No. 11462 Regulatory Docket No. FAA-2015-0269 in the matter of petition of **SKY CATCH**, Inc

SUMMARY

On behalf of Freeborn Concepts LLC (dba RealSkyPics) Les Valsquier seeks exemption from the requirements of 14 C.F.R §§ 45.23, 61.113(a) & (b), 91.9(b)(2), 91.119(c), 91.121, 91.151(a) & (b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a) (2), and 91.417(a) & (b), to operate an Unmanned Aircraft System (UAS) pursuant to Section 333 of the FAA Modernization and Reform Act

of 2012 (FMRA). This exemption will permit operation of a UAS for the commercial purposes of conducting aerial video and photography of construction and real estate sites, and for agricultural/forestry imaging and support consultation. RealSkyPics proposes to operate the UAs in rural and suburban areas primarily in Washington and Oregon, for commercial gain in real estate and agricultural monitoring, as well as to offer community services such as search and rescue on a pro bono basis.

As demonstrated in this petition, RealSkyPics is burdened by being prohibited from commercial operation of its UAS by the above existing provisions of 14 CFR, adopted before and without reference to the current development of commercially viable Unmanned Aerial Vehicles. Pending FAA's adoption of rules specifically tailored to such use, RealSkyPics requests these exemptions because it is in the public interest to provide the commercial services described now, and because the services can be provided at a level of safety at least equal to that provided by the specified rules as well as by the proposed new regulations published in the Federal Register on February 23, 2015.

I. THE UAS

RealSkyPics will operate UAS DJI Phantom 2 Vision+ (Phantom 2). The Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Hence relief from 14 CFR Part 21, Subpart H (Airworthiness Certificates) and associated matters are not necessary. See STRAW.

Safety features included in Phantom 2 provide a level of safety that far exceeds those required by the FAA. These include state-of-the-art features for GPS navigation, return home capability, programmability, airport vicinity no-fly feature and restricted altitude feature. Phantom 2 differentiates radio frequency (RF) for aircraft controller/receiver from that controlling the camera and complies with FCC regulations. See Attached User Manual.

Phantom 2 is light, less than 3 pounds including battery and camera. It incorporates an automatic return home feature that directs the craft back to point of takeoff should communication with the transmitter be lost. Phantom 2 accepts software upgrades. It has cruising speed of 15 knots, with a maximum speed of 29 knots. Maximum flight time is 25 minutes.

The Phantom has an additional communication link between the camera and craft on a different RF for a smart phone connection. These allow the operator or Pilot in Command (PIC) to monitor battery level, altitude in feet above ground level (AGL), distance from PIC, camera imagery, and control camera angle.

The software for the Phantom allows the operator or PIC to set maximum altitude AGL for each flight, allowing customization of flights to no higher than 100 feet, 150 feet, or 200 feet AGL as an examples. The 400 foot maximum AGL can be programmed into the UAS software pre-flight to insure compliance with FAA standards. Adding to the safety capabilities of this UAS, it is programmed to remain in position when controls are released, maintaining altitude and GPS location.

One additional feature is the ability to monitor battery levels on the ground. The controller will warn the PIC when the battery life reaches 25 percent or when the UAV is reaching a point where it will not be able to returned to home point.

The Phantom has numerous default safety features such as an altitude and GPS monitoring function that allows the operator precise determination of height, direction of flight and distance from the operator or PIC. The Phantom will return to a specified location under emergency circumstances like loss of connectivity with controller. low battery or software malfunction.

The requested exemption would support an application for a commercial Certificate of Authorization should a situation arise in which RealSkyPics must route the UA above 200 feet.

The FAA has recently approved numerous exemptions allowing similar use of a Phantom 2 UAS (e.g. Exemption No. 11395 (Straw)).

PHANTOM 3: RealSkyPics intends to purchase the DJI Phantom 3 UA as soon as it is released (imminent), and requests that it be included within the authorizations of this application unless doing so would delay approval of this application. The Phantom 3 has all of the safety features of the Phantom 2, as well as enhanced capabilities. Like the Phantom 2, it is small and lightweight, also under 3 pounds.

II. THE SERVICES

This exemption will permit operation of an UAS for the commercial purposes of conducting aerial video and photography of construction and real estate sites, and for agricultural/forestry imaging and support consultation.

III. THE PUBLIC INTEREST

In providing an exemption process Congress recognized that there may well be publicly beneficial UAS applications that could safely go forward before the FAA completes formal rulemaking regarding UAS use.

Aerial videography for geographical awareness, crop and forestry management, and real estate marketing is not new. However, manned fixed wing aircraft and helicopters are too costly for small business owners. With this exemption RealSkyPics would provide this service at a much lower cost. Further, our small UAS will pose no threat to the public given their small size and lack of combustible fuel when compared to larger manned aircraft. Additionally, the operation of our UAS will minimize ecological costs/damage and promote economic growth by providing information to companies managing natural resources or looking to relocate or build in the areas we service.

Use of UAS avoids the fuel carrying machines previously necessary to obtaining critical information. The UAS is safer, environmentally conscious, provides better perspectives for decision making; allows more frequent and closer monitoring of agricultural/forestry activities resulting in maximally efficient management and greater output and economic returns.

By approving the requested exemption, the FAA will create benefits to the economy, to agriculture/forestry, and to the environment, all of which are ultimately in the public interest.

IV. SPECIFIC CFRs

RealSkyPics notes that 14 CFR part 21, Subpart (H) mandates an airworthiness certificate for any aircraft, and that 14 CFR 91.203 (a) and (b) require such

certificate to be carried within the cockpit or cabin of any craft in flight. In consideration of the size, weight, speed and limited operating area associated with small UAVs, the Secretary of Transportation has determined that such aircraft, including the specific craft to be used by RealSkyPics, meet the conditions of Section 333. Therefore it is not necessary to seek relief from these requirements associated with airworthiness certificates.

The petitioner seeks exemption from the above listed CFRs for the following reasons:

45.23: If necessary we request an exemption from § 45.23 because the UAV will not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Two-inch lettering is impossible to place on such a small aircraft. RealSkyPics will mark the UAS in the largest possible lettering.

61.113(a) & (b): The petitioner requests relief in order to allow pilots who hold a SPORT PILOT (or greater) certificate to serve as the PIC for RealSkyPics operations. To the extent that an exemption to 61.101(e)(4) or (5) is also needed, this request includes them. Any pilot operating under this exemption would be required to comply with any conditions as set forth below, and in a similar fashion to the previously granted exemptions. See Exemption No. 11462, Skycatch, May 5, 2015.

91.9(b)(2) requires an aircraft flight manual in the aircraft. Since this is physically impossible for the UAS proposed, RealSkyPics proposes that an equivalent level of safety will be achieved by maintaining a safety/flight manual with the UAS ground station.

91.119(c) As discussed in Exemption 11138 (TRUDEAU), operations conducted closer than 500 feet to the ground may require that the UA be operated closer than 500 feet to essential persons or objects that would not be possible under existing regulation. The petitioner requests waiver for this condition to allow reasonable and responsible operations in areas of low density development as required. RealSkyPics will not operate UAS in congested areas, 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. RealSkyPics is prepared to comply with

whatever additional conditions the agency finds appropriate to protect persons and objects on the ground.

91.121 As discussed in Exemption 11138 (TRUDEAU) 91.121 is inapplicable since the UAS does not have an altimeter and instead utilizes electronic GPS with a barometric sensor for altitude information. The necessary information is therefore available to the PIC without altimeter concerns.

91.151(a) and (b) As discussed in Exemption 11136 (ADVANCED AVIATION) prior relief has been granted for manned aircraft to operate at less than the prescribed minimums. In addition, similar UAS-specific relief has been granted in Exemption Nos. 8811, 10808, and 10673 for daytime, VFR conditions.

We request an exemption from § 91.151(a) respecting 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 less than 15 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 at least 25% battery power remaining.

RealSkyPics also requests relief from § 91.151(b) which would require landing when "fuel" (here, battery charge) would allow flight for at least 20 additional minutes. Given the Phantom 2's flight duration of about 25 minutes, and RealSkyPics' commitment to not exceed 15 minutes per operation, this regulation is both unnecessary and not feasible.

91.405(a); 91.407(a)(1); 91.409 (a)(1) & (2); 91.417(a) & (b) As discussed and approved in Exemption 11138 (TRUDEAU), and in Exemption 11395 (STRAW), the petitioner proposes to inspect and ensure that the UAS is in a condition for safe flight in accordance with its operating documents. RealSkyPics proposes to follow all of the below-listed procedures, conditions and limitations as to maintenance, inspection, and recordkeeping. RealSkyPics will perform a preflight inspection of the UAS before each flight as outlined in the attached operating documents, and of course comply with any additional conditions outlined in a grant of exemption.

V. OPERATIONS AND SAFETY

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

A. Pilots in Command (PIC)

Any other pilots who would conduct flights will hold a minimum of a FAA Sport Pilot License.

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 pilot commanding a multi-rotor UAS. The PIC will also have accumulated 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 takeoffs and landings in the preceding 90 days (for currency purposes) prior to any flight.

B. Voluntary Operational Conditions and Limitations

RealSkyPics will comply with all of the following conditions and limitations (as well as any others imposed in the FAA decision) should this grant of exemption be provided:

Operate the UAS for less than 15 minutes per flight;

Land the UAS prior to the manufacturer's recommended minimum level of battery power;

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 contained in the operating documents and will actively analyze flight data and other sources of information to constantly update and enhance safety protocols;

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 User Manual).

1. Operations will be limited to the aircraft described in the operating documents which is a quad-rotor aircraft weighing less than 3 pounds: PHANTOM 2 vision Plus or Phantom 3 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 200 feet above ground level (AGL), as indicated by the procedures specified in the operating documents.

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

5. 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.

6. 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.

7. 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.

8. 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.

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

10. RealSkyPics 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.

11. Each UAS operated will comply with all manufacturer Safety Bulletins.

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

13. 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.

14. 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).

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

16. 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.

17. Each UAS operated will comply with all manufacturer Safety Bulletins.

18. 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.

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

20. 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 25% battery power remaining.

21. RealSkyPics will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations where the UA will operate above 200 feet AGL, and also request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to such an operation.

22. 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.

23. 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.

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

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

26. 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. RealSkyPics 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 will cease immediately.

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, operator trainees or essential persons do not present an undue hazard to those persons per §91.119(a).

27. All operations conducted over private or controlled-access property will be 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.

28. All UAS employed under this exemption will be identified by serial number, registered in accordance with 14 CFR part 47.

29. 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.

VI. FEDERAL REGISTER

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

In order to operate commercially a small unmanned vehicle (10lbs or less) for real estate and agricultural/forestry functions, applicant RealSkyPics seeks exemption from the following rules: 14 C.F.R 45.23(b); 14 C.F.R. §§ 61.113(a) & (b); 91.7(a); 91.9 (b)(2); 91.103(b); 91.109; 91.119; 91.121; 91.151(a); 91.203(a) and (b); 91.405(a); 91.407 (a) (1); 91.409 (a) (2); 91.409 (a) (2) and 91.417 (a) & (b).

Approval of exemptions allowing commercial operations of small Unmanned Aerial Systems (sUAS) for real estate information and in agriculture/forestry management provides critical economic information with enhanced safety and reduced risk. Manned aircraft monitoring and surveying creates a greater risk because the craft are much larger, have combustible fuel, and carry an onboard human pilot. In contrast, sUAS powered by batteries eliminate virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The sUAS carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights. Operation of small sUAS conducted in the strict conditions required by FAA approval will provide a public benefit at a level of safety supporting the grant of the exemptions requested.

VII. **PRIVACY**

All flights will occur over private or controlled access property with the property owner's prior consent and knowledge. Images taken will be of individuals who have also consented to being filmed or otherwise have agreed to be in the area where aerial photography will take place.

This concludes RealSkyPics application. Please contact me with any questions.

Sincerely,

Les Valsquier
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dba RealSkyPics
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