



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

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

June 1, 2015

Exemption No. 11725
Regulatory Docket No. FAA-2015-0191

Mr. Mike Levin
Mike Levin Photography and Digital Imaging
2941 Susquehanna Road
Roslyn, PA 19001

Dear Mr. Levin:

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 letters¹ posted to the docket on January 28 and April 16, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Mike Levin Photography and Digital Imaging (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography for real estate, architectural engineering, construction industry sites, and motion picture and television operations.

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.

¹ The petitioner submitted additional information to the docket on April 24, April 27, April 28, and May 13, 2015.

Airworthiness Certification

The UAS proposed by the petitioner are the KongCopter X8 and 3DRobotics IRIS+.

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 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 collection² and closed set motion picture and filming. 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, Mike Levin Photography and Digital Imaging is

² 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.

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 and closed set motion picture and filming. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Mike Levin Photography and Digital Imaging 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 KongCopter X8 and 3DRobotics 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 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.nts.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 June 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Enclosures

Mike Levin
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<http://mklphoto.com>

I, the (PIC) would like to be considered under the 'new blanket COA' for flights at or below 200 feet, within VLOS and safe separation from airports or heliports. Unmanned Aircraft System (UAS) usage for aerial photography, real estate, architectural, engineering, construction industry sites, motion picture and television operations. I have been a photographer for over 30 years, am in good health and was recently published in Editor and Publisher regarding drones in Journalism. <http://www.editorandpublisher.com/Columns/Article/Editorial--Drone-Talk-is-Droning>. I've recently attend a VTOL conference at the University of Maryland with the FAA's Earl Lawrence. I am a member of the AMA, AUVSI, and Drone Journalism.org.

With regard to my initial Section 333 request. I will be using a KongCopter X8 small UAS, along with a 3Dr (3D Robotics) Iris+ small UAS. Both units run the same software code as found in the already FAA approved 3Dr Iris+. I have been flying for three years without incident, and I keep a maintenance and flight log. I would use the X8 for situations where motor redundancy is paramount in terms of safety, and or extra payload of a slight larger camera.

In accordance with the statutory criteria provided in Section 333 of P.L. 112-95 in reference to 49 USC § 44704, and in consideration of the size, weight, speed, both aircraft meet the conditions of Section 333.

The KongCopter is being custom built, with stronger more reliable components by DebonairUAS, a long time UAS Alabama based UAS manufacturing company. <https://debonairuastechnologies.wordpress.com/>

The KongCopter test flight can be seen here. <https://www.youtube.com/watch?v=0liQ-AO7M2Y>

-Manned aircraft conducting aerial photography operations can weigh thousands of pounds or more, are operated by an onboard pilot and may carry other onboard crew members, as well as carry large quantities of fuel. The petitioner's unmanned aircraft (UA) weighs approximately 4 pounds. The pilot and crew will be remotely located from the aircraft. The limited weight and construction reduces the potential for harm to persons or damage to property in the event of an incident or accident. The risk to an onboard pilot and crew during an incident or accident is eliminated with the use of a UAS for the proposed operation.- Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. The UA carries no fuel and therefore the risk of fire following an incident or accident due to fuel spillage is eliminated.

Both UAS have the capability to operate safely after experiencing certain in-flight contingencies or failures and uses an auto-pilot system to maintain UAS stability and control. Both UAS are also able to respond to a loss of global positioning system (GPS) or a lost-link event with a pre-coordinated, predictable, automated flight maneuver.

These safety features

provide an equivalent level of safety compared to a manned aircraft holding a restricted airworthiness certificate performing a similar operation. Both UAS being under 5 lbs., will provide me with the ability to provide aerial vistas for my customers, without resorting to the high cost, high noise, passenger, crew, fuel explosion danger, and waste of fossil fuels, thereby providing public benefit with limited impact. Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. Both UAS carries no fuel, and therefore the risk of fire following an incident or accident due to fuel spillage is eliminated.

Request relief from 14 CFR §§ 91.405(a) Maintenance required, 91.407(a)(1) Operation after maintenance, preventive maintenance, rebuilding, or alteration, 91.409(a)(2) Inspections, and 91.417(a) and (b) Maintenance records. Operating documents contain preflight and post flight checks for the UAS. Request relief from § 91.409(a)(1) because of alternate inspection requirements of § 91.409(a)(2). Operating documents, as should be sufficient to ensure that safety is not adversely affected.

Requested relief from 14 CFR § 61.113(a) and (b), Private pilot privileges and limitations. I plan to operate in uncontrolled airspace and over private property with controlled access. Given: 1) the similar nature of the petitioner's proposed operating environment to that of Astraeus, 2) the parallel nature of private pilot aeronautical knowledge requirements to those of commercial requirements as discussed in Exemption No. 11062, and 3) the limited airmanship skills necessary to operate the UAS, the FAA found that the additional manned airmanship experience of a commercially certificated pilot, would not correlate to the airmanship skills necessary for the petitioner's specific proposed operations.

As the PIC, I will enroll in appropriate training for fixed wing aircraft, if required. I will operate the UAS in a manner consistent with and including evasive and emergency maneuvers while maintaining appropriate distances from people, vessels, vehicles, and structures.

Request Relief from 14 CFR § 91.121 Both UAS uses information generated from GPS to transmit altitude information to the PIC.

Requested relief from § 91.151(a) Fuel requirements. No fuel required. Similar UAS-specific relief has been granted in Exemption Nos. 8811, 10808, and 10673 for daytime, VFR conditions. The petitioner proposes to land the UAS after 10 minutes in flight or prior to 30% battery power remaining. The operating documents indicate that the UAS will return to the launch point and land when the battery reaches 30% of capacity. I will contact ATC if at any time I am needing to operate within 5 NM of an airport, and will comply with all NOTAMs. I have studied to be an ATC in the past.

This serves as a summary which you may publish in the Federal Register.