



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

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

June 8, 2015

Exemption No. 11779
Regulatory Docket No. FAA-2015-0911

Mr. Randy C. Zachary
President
RKC Media Solutions, LLC
520 West Lake Mary Boulevard
Suite 100
Sanford, FL 32773

Dear Mr. Zachary:

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 March 26, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of RKC Media Solutions, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, and data capture.

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. However, two comments were submitted to the public docket. One commenter supported the petition while the other opposed it. In granting this exemption, the FAA has determined that the proposed operations can safely be conducted under the conditions and limitations of this exemption. As with exemptions issued to Aeryon Lab, Astraeus Aerial, Clayco, Inc., and VDOS Global, LLC, failure to comply with the document's conditions and limitations is grounds for immediate suspension or rescission of the exemption.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI-S900.

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 collection¹. 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, RKC Media Solutions, LLC 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),

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.

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.

Conditions and Limitations

In this grant of exemption, RKC Media Solutions, LLC 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-S900 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.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

Project Officer: _____

**MR RANDY C ZACHARY
RKC MEDIA SOLUTIONS LLC
520 W LAKE MARY BLVD
STE 100
SANFORD FL 32773**



DEPARTMENT OF
TRANSPORTATION
SECRET OPERATIONS

2015 APR -1 P 12:01

510 W. Lake Mary Blvd, Suite 100, Sanford, FL 32773 Office: (407.732.7710)

March 26, 2015

Department of Transportation

Docket Management System

West Building Ground Floor, Room W12-140

1200 New Jersey Ave. SE

Washington, DC 20590-001

Re: Exemption Request Section 333 of the FAA Reform Act

Dear Sir/Madam

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act"), and 14 C.F.R. Part 11-Federal Aviation Regulations, RKC Media Solutions, LLC ("RKC"), an aerial video company operating a small Unmanned Aircraft System/Vehicle (hereinafter referred to as "UAS" or "UAV") equipped to conduct aerial photography and survey for various industries, hereby applies for an exemption from the Federal Aviation Regulations (FARs) listed below to allow for the commercial operation of RKC's UAS in airspace regulated by the Federal Aviation Administration (FAA) so long as such operations are conducted with and under the conditions outlined herein or as may be provided by the FAA as required by Section 333.

The requested exemption would permit RKC to provide services to its consumers interested in aerial data capture using a small advanced UAV in the following areas:

- Communication Cellular Tower Inspections and Monitoring
- Real Estate Photography
- Surveying
- Marine Photo & Video
- Agriculture
- Special Events
- Other

RKC provides that all UAS flights that will occur over private or controlled access property will be done with the property owner's prior consent and knowledge and that only people who have consented or otherwise have agreed to be in the area where filming will take place will be filmed.

Additionally, RKC's UAS will be flown by persons holding a FAA Private Pilot License with Class III Medical Certificate.

Regulations From Which the Exemption Is Requested:

14 C.F.R. 61.113(a)

14 C.F.R. 91.7 (a)

14 C.F.R. 91.119 (c)

14 C.F.R. 91.121

14 C.F.R. 91.151(a)(1)

14 C.F.R. (91.401 - 91.417)

Unmanned Aircraft System

UAVs are oftentimes seen as superior to helicopters due to the smaller devices cheaper equipment and personnel cost, reduced noise and, as such, a much smaller environmental impact which promotes public safety.

RKC is petitioning for exemption from the regulations set forth above to enable RKC to operate a DJI-S900 UAV ("DJI-S900"). This UAV has a built-in capability to limit the height it flies above the ground, to limit the radius of the distance it flies from the operator and to exclude it from Class B, C and D airspace including a no fly zone feature. The DJI-S900 also has the failsafe function of the autopilot system which means when the communication between the Main Controller and the transmitter is disconnected or any other error is detected by the on-board flight controller system, the outputs of all command sticks from the controller will go to the center position and, using the on-board GPS system, the vehicle is designed to return to its pre-flight calibrated starting point and will land safely.

The above specifications meet with the Model Aircraft Operating Standards as set below:

- The petitioner will only operate its UAS in line of sight of a pilot and/or observer and will operate at sites that are a 'sufficient distance' from populated areas within the sterile area described in the FOPM. Such operations will insure that the UAS will "not create a hazard to users of the national airspace system or the public."
- When flying a UAV within 5 miles of an airport, airport operators will be notified and the operator will give the right of way to avoid flying in the proximity of full-scale aircraft.
- Maximum flight time for each operational flight will be 20 minutes.
- Flights will be terminated at 25% battery power reserve should that occur prior to the 20 minute limit.
- The UAV will be programmed so that it will not be operated at an altitude of any higher than 400 feet AGL, and not more than 200 feet above an elevated platform from which filming is planned.
- Minimum crew for each operation will consist of the UAS Pilot, the Visual Observer, and the Camera Operator.
- The UAS PIC's (Pilot in Command) will be an FAA licensed airman holding a FAA Private Pilot License and Third Class FAA Medical Certificate.
- The UAS operated by the petitioner weighs less than 55 pounds, including the payload (i.e., camera, lens, and gimbal).
- The UAV will operate at speeds of no more than 50 knots, can hover, and can simultaneously move vertically and horizontally.
- Given the small size of the UAS and the restricted sterile environment within which they will operate RKC's UAS operations adhere to the Reform Act's safety requirements.

In further support of RKC's request for the exemptions set forth herein, please find attached the Pilot Operating Handbook for the DJI-S900 ("Handbook"). The Handbook includes the specifications of the DJI-S900 UAS, as well as a pre-flight checklist and post-flight checklist.

Under the requested exemption, RKC will ensure that all operators have completed a UAS education and training program including all applicable regulations and guidance documents; including aeronautical background information such as charts, NOTAMS and Aircraft Circulars; Radio Communications Procedures; Basic Small UAS Aerodynamics; Weather factors; Airmanship and Decision-making and Safe Operating Procedures.

RKC respectfully requests exemption under Section 333 to enable RKC to operate efficient, limited, low-risk commercial UAV operations for the activities above-stated respecting at all times the space and privacy of citizens and property whilst keeping our skies safe.

Sincerely

A handwritten signature in black ink that reads "Randy C. Zachary". The signature is fluid and cursive, with a large loop at the end of the last name.

Randy C. Zachary, President

RKC Media Solutions, LLC

520 W. Lake Mary Boulevard

Suite 100

Sanford, FL 32773

(407) 732-7710

EXEMPTION REQUESTS AND EQUIVALENT LEVEL OF SAFETY

RKC Media Solutions, LLC requests an exemption from the following regulations as well as any additional regulations that may technically apply to the operation of the UAV System:

14 CFR 61.113 Private pilot privileges and limitations: Pilot in Command and 61.133 Commercial pilot privileges and limitations.

The regulation provides that no person that holds a Private Pilot certificate may act as Pilot in Command of an aircraft for compensation or hire. RKC's proposed operations require that the PIC must hold at least a Private Pilot Certificate issued by the FAA and, since the aircraft cannot carry passengers or property, RKC feels it meets the intent of 61.113.

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(c) Minimum safe altitudes over other than congested areas: General. The regulation states that over sparsely populated areas the aircraft cannot be operated closer than 500 feet to any person, vessel, vehicle, or structure. Since the typical mission of the UAS would be photography or survey of persons, vessels, vehicles or structures it would be necessary to operate closer than 500 feet to the items listed. Operations will only be flown over property or persons where permission has been obtained and careful pre-planning has been performed. The aircraft will be operated at a low altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface. Therefore RKC maintains that, due to the small size of the UAS, the hazard to persons, vehicles and structures is minimal compared to manned aircraft, which should be considered in granting the exemption.

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 UAV

will always fly below 400 feet Above Ground Level ("AGL") and will not need to maintain cruising altitudes in order to prevent conflict with other aircraft. An AGL altimeter measurement above the takeoff point is transmitted via radio from the UAV on-board computer to the display screen held by the PIC, providing a constantly updated AGL readout.

14 CFR 91.151 Fuel requirements for flight in VFR conditions.

The regulation provides that no person may begin a flight in an airplane under day-VFR conditions unless there is enough fuel to fly to the first point of intended landing and to fly after that for at least 30 minutes. RKC feels the intention of

this paragraph is to provide an energy reserve as a safety buffer for delays to landing. The UAV is battery operated and the maximum duration of flight from a single battery charge is 20 minutes with a 25% reserve. Since the aircraft will never fly more than 3,500 feet from the point of intended landing, a full battery charge at launch will ensure that the reserve energy requirement of this paragraph will be met.

14 CFR Subpart E (91.401- 91.417) - Maintenance, Preventive Maintenance, Alterations.

The regulation provides that the operator is primarily responsible for maintaining the aircraft in an airworthy condition, including compliance with parts 39 and 43. Paragraphs 91.407 and

91.409 require that the aircraft be "approved for return to service by a person authorized under 43.7" after maintenance and inspection. It is RKC's intention that the PIC perform maintenance and inspection of the aircraft and "be authorized to approve the aircraft for return to service ." The PIC will ensure that the aircraft is in an airworthy condition prior to every flight and in addition conduct detailed inspections after every two hours of flight. Maintenance performed by the PIC is limited to repairing small cracks, replacing a propeller, checking electrical connections and updating software and firmware for the on-board computer. All other maintenance will be performed by the manufacturer or their designated repair facility. The PIC will document work performed in accordance with 91.417. RKC feels that due to the size, construction, and simplicity of the aircraft, the PIC can ensure an equivalent level of safety.