



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

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

July 10, 2015

Exemption No. 12007
Regulatory Docket No. FAA–2015–0718

Mr. Greg Steinmetz
Chosen Productions
4316 McCahill Road
Red Bank, TN 37415

Dear Mr. Steinmetz:

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 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Chosen Productions (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, and closed-set filming of motion pictures.

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 is a K130 Multirotor.

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 collection¹ 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, Chosen Productions 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 and closed set motion picture and filming. 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, Chosen Productions 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 K130 Multirotor 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 5 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 July 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

March 17, 2015

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Re: Exemption Request under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations

Dear Sir or Madam,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 and 14 C.F.R Part 11, and the Federal Aviation Administration's ("FAA") general exemption authority under 49 U.S.C. § 44701(f), Chosen Productions ("Petitioner") hereby petitions for exemptions from:

14 C.F.R. Part 21 Subpart H
14 CFR § 45.23
14 CFR § 45.29
14 CFR § 91.203(a) & (b)
14 CFR § 91.9(b)(2)
14 CFR § 61.113 (a) and (b)
14 CFR § 91.119
14 CFR § 91.121
14 CFR § 91.151
14 CFR Subpart E § 91.403
14 CFR Subpart E § 91.405(a)
14 CFR Subpart E § 91.407
14 CFR Subpart E § 91.409
14 CFR Subpart E § 91.417
8900.227 Paragraph 16(e)(1)

Petition Summary

The proposed exemptions, if granted, would allow Petitioner to operate unmanned aircraft systems ("UAS") weighing 55 pounds or less for the purpose of aerial still photography, aerial videography and closed-set filming of motion pictures. Based on the small size of Petitioner's UAS, the qualifications and experience of Petitioner's UAS operators, and the restricted, sterile environment within which Petitioner will operate, the requested exemptions fall squarely within the zone of safety envisioned by Congress set forth in Section 333. The Petitioners, in the past have chartered full-sized helicopters for the purpose of video production, which has proven more costly and with a higher safety risk than that of a small UAS. Chosen Productions highest goal is the safety of the public, property and national airspace. The UAS will be operated in accordance with the FAA policy N 8900.227 Section 14 "Operational Requirements for UAS". The specific guidelines and procedures detailed in the "Operations Manual" and the "Pilots Operating Handbook" proposed by the Petitioner gives the FAA good cause to find that the UAS operations are in the public interest.

EXEMPTION REQUESTS AND EQUIVELANT LEVEL OF SAFETY

14 CFR Part 21, Subpart H: Airworthiness Certificates

Petitioner requests 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 following paragraph and attached operations manual. If an airworthiness certificate exemption is not appropriate for this application, then petitioner requests an experimental certificate be issued 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, we would expect that an experimental certificate, if applicable, 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 outlined in Petitioners Operations Manual.

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 UAS 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.

Petitioner proposes to achieve an equivalent level of safety, if an experimental certificate is required, by including the word "EXPERIMENTAL" on a placard on the rear of the aircraft where the PIC, VO and others in the vicinity of the will be able to see the designation. An additional placard, described in the following section, displayed on the aircrafts ground station will provide the aircraft's registration information at the ground level also.

14 CFR 91.203(a) & (b) Civil aircraft: Certifications required

The regulation provides that an airworthiness certificate, with the registration number assigned to the aircraft and a registration certificate must be aboard the aircraft. Additionally, subparagraph (b) provides that the airworthiness certificate be "displayed at the cabin or cockpit entrance so that it is legible to passengers or crew."

At a maximum gross weight of 27 pounds, the UAS is too small to carry the required "legible" documentation, is not capable of carrying passengers or crew, and does not have an entrance. To obtain an equivalent level of safety and meet the intent of 91.203, we propose that documents deemed appropriate for this aircraft by the FAA will be co-located with the crew at the ground control station and available for inspection upon request. In order to identify the aircraft, we propose that the information placard outlined in the 14 CFR 45.23 exemption section above, be permanently affixed to the aircraft via placard containing the word "EXPERIMENTAL" (if applicable) to satisfy the requirement of 14 CFR 45.23. Petitioner is also prepared to "fold" documentation into a smaller form factor to be displayed in the aircraft if needed.

14 CFR 91.9(b)(2), Civil aircraft flight manual, marking, and placard requirements.

This regulation provides that no person may operate an aircraft unless a current, approved flight manual is in the aircraft. Petitioner assumes that the intent of this requirement is to ensure that flight manual information is available to the aircrew while operating the aircraft. We request an exemption to this requirement since the aircraft is not only too small to carry documentation.

To obtain an equivalent level of safety and meet the intent of 91.9, we propose that a current, approved UAS Flight Manual must be available to the crew at the ground station anytime the aircraft is in, or preparing for, flight.

14 CFR 61.113 (a) and (b) 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. Subparagraph (b) allows a private pilot to act as pilot in command of an aircraft in connection with any business or employment if: (1) The flight is only incidental to that business or employment; and (2) The aircraft does not carry

passengers or property for compensation or hire. Our proposed operations require that the PIC must either:

1. Hold a Private Pilots Certificate issued by the FAA
2. Meet the requirements of 8900.227 para 16(c)(2)(c) "Operations without a pilot certificate" in which the PIC is required to complete "FAA private pilot ground instruction" and pass "the FAA Private Pilot written examination."

There are currently no means available for the pilot of a UAS to gain the experience in an equivalent category and class in order to apply for a commercial pilot's license, we propose to generate an equivalent level of safety. Petitioner's PIC currently holds a Private Pilots Certificate issued by the FAA. Since the aircraft cannot carry passengers or property, we feel we meet the intent of 61.113 Subparagraph (b) even though the intent of this application is to conduct a business.

14 CFR 91.119 Minimum safe altitudes: General

14 CFR 91.119(c) states that over sparsely populated areas the aircraft cannot be operated closer than 500 feet to any person, vessel, vehicle, or structure. Since the aircraft will be operating at a maximum of 400 feet AGL, we cannot comply with this requirement.

Consistent with the relief typically provided to manned operations under FAA Order 8900.1, Volume 3, Chapter 8, Section 1, Petitioner requests relief from 14 CFR 91.119 in respect to those participating persons, vehicles, and structures directly involved with the filming process. Petitioner's Operating Manual sets forth safety factors for authorizing and consenting production personnel. Therefore we maintain that due to the small size of the UAS, the hazard to persons, vehicles and structures is minimal compared to manned aircraft.

14 CFR 91.121 Altimeter settings

The regulation requires that aircraft shall maintain cruising altitudes by reference to an barometric altimeter setting available within 100 NM of the aircraft.

The UAS will always fly below 400 feet AGL and will not need to maintain cruising altitudes in order to prevent conflict with other aircraft. An Above Ground Level altimeter measurement, in feet, above the takeoff point is transmitted via radio from the UA on-board computer to the display screen held by the PIC, providing a constantly updated AGL readout. Petitioner seeks such relief because Petitioner will not have a typical barometric altimeter onboard the UAS. Instead, altitude information is generated by GPS equipment installed onboard the UAS and digitally transmitted to the ground station display. Prior to each flight, a zero altitude initiation point will be established and confirmed for accuracy by the UAS PIC. Thus, good cause exists for granting the requested relief from 14 C.F.R. § 91.121.

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.

Petitioner seeks exemption regarding; the UAS is battery operated and the maximum duration of flight with payload from a single battery charge is 9 minutes 30 seconds minutes with a 30% reserve. Since the aircraft will never fly more than 3/4NM from the point of intended landing, a full battery charge at launch (procedures outlined in the Pilots Operating Handbook) will ensure that we meet the reserve energy requirement of this paragraph.

14 CFR Subpart E (91.403, 91.405(a), 91.407, 91.409, 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 part 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 our intention that the VO perform maintenance and inspection of the aircraft and "be authorized to approve the aircraft for return to service." Petitioners VO has six years' experience in maintenance and service with this type of aircraft. As provided in the Pre-Flight Checklist, both the PIC and VO will ensure that the aircraft is in an airworthy condition prior to every flight. This is also how the petitioner will comply with 14 C.F.R. 91.7(a) Civil Aircraft Airworthiness. The Pilots Operating Handbook outlines documentation required for the maintenance, service and inspecting the UAS. The VO will document work performed in accordance with 91.417. We feel that due to the size, construction, and simplicity of the aircraft, petitioner can ensure an equivalent level of safety.

8900.227 Paragraph 16(e)(1) Observer Medical

This policy provides that both the PIC and VO must have a valid FAA second-class medical certificate issued under Part 67 in order to perform as a pilot or observer.

Both the PIC and the VO are required to be in VLOS. Given the unlikely event that both the PIC and VO become medically incapacitated while the aircraft is in flight, the UAS will return autonomously to the site of launching and land without crew intervention. Petitioner currently complies with the minimum medical requirements for the PIC as described in Paragraph 16(c)(4). Petitioner requests exemption from 8900.227 Paragraph 16(e)(1) requiring the VO to meet the same medical requirements as commercial pilot carrying passengers in a large aircraft. Petitioner requests the minimum requirements for VO be vision corrected to 20/20. The 20/20 vision requirement will ensure that both the PIC and VO can see and avoid air traffic.