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

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

August 20, 2015

Exemption No. 12550
Regulatory Docket No. FAA−2015−1972

Mr. Kyle Joseph Brow
3086 West Cook Road
Grand Blanc, MI 48439

Dear Brow:

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 letters posted to the public docket May 28, 2015, June 15, 2015, and June 30, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial videography and cinematography.

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 Blade 350 QX3.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft

meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

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

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

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

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Mr. Kyle Joseph Brow 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 filming. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Mr. Kyle Joseph Brow is hereafter referred to as the operator.

[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.

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 Blade 350 QX3 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 August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

United States Department of Transportation
Docket Management System
1200 New Jersey Ave., SE West Building Ground Floor Room W12-140
Washington, DC 20590

Re: Exemption Request Regarding To Section 333 of the FAA Reform Act of 2012

Dear Entitled FAA Representative,

I am writing regarding to the FAA Modernization and Reform Act of 20121 (the "Reform Act") to respectively request that Kyle Joseph Brow, be exempted from the Federal Aviation Regulations ("FARs") listed below so that he shall operate his small unmanned aircraft ("UAS") commercially in airspace regulated by the Federal Aviation Administration ("FAA"); as long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333. Kyle has extensive remote control UAS experience and knowledge. He has over 25 years experience operating RC aircraft's and vehicles. In addition, he has extensive experience with duel thumb joystick controllers.

The need for UAS approval is for commercial and residential aerial photos. Total UAS flight time would be 25 minutes or less. The height required for aerial photos is on average 400 ft or less. The UAS would not fly near or around airports.

The operating UAS utilizes four counter-rotating propellers for optimal balance, control and stability. The UAS weighs less than 55 pounds. It hovers and stabilizes in place and can operate at less than a 50 knot maximum speed. The UAS is capable of vertical, horizontal and 360 degree operations. The UAS utilizes a personal tablet for viewing flight with on-board camera for added safety.

The remote control pilot (named above), uses a spotter when available and a technician, so that a safe flight can be achieved at all times. In addition, a pre-flight check is always done before every flight. The UAS is checked for cracks, wire frays, battery life, propeller condition, power test, motor calibration, remote controller batter life, remote controller functionality, viewing tablet battery life, verify connection UAS camera, and operating and connected to tablet.

Safety precautions include:
• The UAS only operates UAS below 400 feet.
• The UAS only operates for 5-25 minutes per flight.
• Remote control pilot operates the UAS by camera connected to personal tablet and line of sight.
• The UAS has GPS flight modes where it shall hover and then slowly land if communication with the remote control pilot is lost or battery power is below 25%.
• Pre-Flight checks are done before every flight. (detailed above)
•The UAS weighs less than 55 pounds.
• The UAS only operates in secured areas that are strictly controlled, and are away from airports.
• Analysis of electronic flight data and other sources of information are used to constantly update and enhance safety protocols.
• The UAS will land safe when it reaches 25% battery power.

Kyle respectfully requests that the FAA grant its exemption request. The FAA has the authority to issue the exemption sought by Kyle Joseph Brow regarding the Federal Aviation Act, 85 P.L. 726 (1958) amended (the "Act").

With Regards,
Kyle Joseph Brow
(810) 223-1747
kbrow109@gmail.com

Kyle Joseph Brow
3086 W. Cook Rd.
Grand Blanc, MI 48439

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Your Voice in Federal Decision-Making

Kyle Joseph Brow - Additional Information

This Other document was issued by the **Federal Aviation Administration** (FAA)

For related information, **Open Docket Folder**

Content

Important Drone
Information: http://www.bladehelis.com/350QX3/

Blade 350 QX3 Quadcopter
Blade CGO2 GB HD Camera with Integrated 3-Axis Brushless Gimbal
Micro SD Card for Camera
E-flite 3000mAh 11.1V Li-Po Flight Battery
E-flite DC Li-Po Battery Charger with AC Adapter
Spektrum DX4 Transmitter with Mobile Device Mount
Four AA Transmitter Batteries
CGO2 Camera with integrated gimbal installed
SAFE Technology
Length: 465mm (18.3 in)
Width: 465mm (18.3 in)
Height: 190mm (7.5 in)
Weight: 955 g (33.7 oz)
Flight Time: 10-15 minutes
Advanced SAFE (Sensor Assisted Flight Envelope) technology. The Blade 350 QX3 has two flight modes that have been specially programmed for capturing aerial video and images. Both feature self-leveling and use GPS and altitude sensors to precisely hold position in a hover.
SAFE technology will even land the aircraft for you if you activate the Return Home function.

Attachments (1)

Kyle Joseph Brow - Additional Information

View Attachment: JPG PDF

Comment Period Closed

ID: FAA-2015-1972-0002

Document Information

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Jun 15, 2015

Show More Details

Submitter Information

Submitter Name:
Kyle Brow

Comments

0
Comments Received *

Docket Information

This document is contained in
FAA-2015-1972

Related Dockets:
None

Related RINs:
None

Related Documents:
- U.S. DOT/FAA - Request for Additional Information
- Kyle Joseph Brow - Exemption/Rulemaking

* This count refers to the total comment/submissions received on this *document*, as of 11:59 PM yesterday. Note: Agencies review all submissions, however some

United States Department of Transportation
Docket Management System
1200 New Jersey Ave., SE West Building Ground Floor Room W12-140
Washington, DC 20590

Re: Exemption Request Regarding To Section 333 of the FAA Reform Act of 2012
Additional Information requested:

Dear Entitled FAA Representative,

The task was requested to provide additional information regarding the following:

1. The specific section or sections of 14 CFR from which you seek relief, the extent of the relief you seek, and the reason you seek relief.

2. The reasons why granting the request would be in the public interest; that is, how it would benefit the public as a whole.

3. Any additional information, views, or arguments available to support your request

1. The Extent of Relief Kyle J Brow Seeks and the Reason It Seeks Such Relief:
Kyle J Brow submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FARs operating to prevent Kyle J Brow contemplated commercial cinematic, video, and other flight operations within the national airspace system. The FAA has the authority to issue the exemption sought by Kyle J Brow pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the act").
The Reform Act in Section 333 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. Kyle J Brow's lightweight UASs meets the definition of "small unmanned aircraft" as defined in Section 333 and therefore the integration of Kyle J Brow's lightweight UASs are expressly contemplated by the Reform Act. Kyle J Brow would like to operate its lightweight UASs prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such craft.

2. How Kyle J Brow's Request Will Benefit the Public As A Whole:
Granting Kyle J Brow's exemption request furthers the public interest. Kyle J Brow intends to produce video content promoting the Michigan region and potentially other regions. Cinema quality video provides a unique perspective and tool that will aid in the region's community based, municipal, and commercial organizations in promoting much-needed business development.
Additionally, Congress has already pronounced that it is in the public's interest to integrate commercially flown UASs into the national airspace system, hence the passing of the Reform Act. Second, Kyle J Brow conducts research into safe UAS operations every time it flies one of its UASs. Flight data, visual inspections, recorded observations and flight analysis are compiled to further enhance current safety protocols. Allowing Kyle J Brow to log more flight time directly relates to its ability to finer enhance current safety measures. Third, the public has an interest in reducing the danger and emission associated with current aerial cinematic capture methods, namely, full size helicopters. Kyle J Brow's UASs are battery powered and create no emissions. If Kyle J Brow's UAS crashes there is no fuel to ignite and explode. The impact of Kyle J Brow's lightweight UASs is far less than a full size helicopter, notwithstanding the statistically noteworthy safety record of full size helicopters used in motion picture and video capture. The public's interest is furthered by minimizing ecological and crash impacts by permitting motion picture and video capture through Kyle J Brow's lightweight UASs.
Progression of the arts and sciences has been fundamental to our society since its inclusion in the United States Constitution. Indeed, Congress mandated the integration of UASs into our national airspace system, in part, to achieve progression in this noteworthy, and inevitable, field. Permitting Kyle J Brow to immediately fly within

the United States furthers these goals. Whether it is the amalgam of scientific discoveries applicable to feature film making (including those drawing upon architecture, physics, engineering and cultural inclusiveness) to advancements in publicly usable technologies or advancements in equipment available to law enforcement personnel I first responders that does not cost millions of dollars, granting Kyle J Brow's exemption request substantially furthers the public's interest in ways known and currently unknown.

3. Kyle J Brow seeks an exemption from the following Regulations: 14 C.F.R. 21, subpart H; 14 C.F.R. 45.23(b); 14 C.F.R. §§ 61.113 (a) & (b); 14 C.F.R. § 91.7 (a); 14 C.F.R. § 91.9 (b)(2); 14 C.F.R. § 91.103(b); 14 C.F.R. § 91.109; 14 C.F.R. § 91.119; 14 C.F.R. § 91.121; 14 C.F.R. § 91.151(a); 14 C.F.R. §§ 91.203(a) and (b); 14 C.F.R. § 91.405 (a); 14 C.F.R. § 91.407 (a)(l); 14 C.F.R. § 91.409 (a)(2); 14 C.F.R. § 91.409 (a)(2); and, 14 C.F.R. §§ 91.417 (a) & (b) to commercially operate its small unmanned vehicles and lightweight unmanned aircraft vehicles in motion picture or television operations, to conduct its own research and to develop economic platforms for law enforcement I first responders.
Granting Kyle J Brow's request for exemption will reduce current risk levels and thereby enhance safety. Currently, video and motion picture image capture relies primarily on the use of larger aircraft running on combustible fuel. Kyle J Brow's craft do not contain potentially explosive fuel, are smaller, lighter and more maneuverable than conventional motion picture aircraft. Further, Kyle J Brow's operates at lower altitudes and in controlled areas. Kyle J Brow has been analyzing flight data and other information in compiling novel safety protocols and the implementation of a flight operations manual that exceeds currently accepted means and methods of safe flight.
There are no people on board Kyle J Brow's UASs and therefore the likelihood of death or serious bodily injury is significantly limited. Kyle J Brow's operation of its UASs, weighting less than 25 pounds and traveling at speeds lower than 50 knots in cordoned off areas will provide at least an equivalent level of safety as that achieved under current FARs.

agencies may choose to redact, or withhold, certain submissions (or portions thereof) such as those containing private or proprietary information, inappropriate language, or duplicate/near duplicate examples of a mass-mail campaign. This can result in discrepancies between this count and those displayed when conducting searches on the Public Submission document type. For specific information about an agency's public submission policy, refer to its website or the Federal Register document.