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

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

September 17, 2015

Exemption No. 12900
Regulatory Docket No. FAA−2015−2670

Mr. Omar Herrera
21 Kristi Lane
Woodbury, NY 11797

Dear Mr. Herrera:

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 June 5, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography.

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 DJI Inspire 1.

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, Omar Herrera 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

[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.

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, Omar Herrera 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 Inspire 1 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 September 30, 2017, unless sooner superseded or rescinded.

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

Enclosures

Omar Herrera
(Proposed dba: iDroneVision)
21 Kristi Lane
Woodbury, NY 11797

June 5, 2015

U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room w12-140
1200 New Jersey Avenue, SE.
Washington, DC 20590

Re: **Exemption Request Section 333** of the FAA Reform Act of the Federal Aviation Regulations from 14 CFR Part 21 subpart H, 14 CFR 45.23 (b), 14 CFR 91.7 (a), 14 CFR 91.9 (b) (2), 14 CFR 91.103, 14 CFR 91.109, 14 CFR 91.119 (c), 14 CFR 91.121, 14 CFR 91.203 (a) and (b), 14 CFR 91.405 (a), 14 CFR 91.407 (a) (1), 14 CFR 91.409 (a) (2), 14 CFR 91.417 (a) and (b)

Dear Sir or Madam,

I, Omar Herrera (proposed dba: " *i*DroneVision "), write this letter pursuant to the FAA Modernization and Reform Act of 2012 and the procedures contained within 14 C.F.R.11, and request that I, Omar Herrera, a Licensed Real Estate Broker for over 12 years and owner/operator of a small unmanned aircraft system ("UAS"), be exempt from the Federal Aviation Regulations ("FARs") listed below and be granted exemption to operate an unmanned aircraft system ("UAS") commercially in airspace regulated by the Federal Aviation Administration ("FAA").

The Exemption Request would be for **a DJI Inspire 1, Model T 600** UAS that I own, with intent to commercially offer for compensation low cost aerial photography and videography to other real estate brokers / agents within the NAS. In the public interest this will enhance their listings offered for sale in today's competitive market without the high cost of using manned aircraft for aerial photography and videography. The use of UAS's in the real estate industry provides both buyers and sellers a higher level of service for marketing and advertising appealing to more buyers, resulting in fewer days on the market sales. Home sales also increase the economy as a whole. I will be able to provide a high level of service without the use of high cost fuel, emissions, and loud manned aircraft noise and in less time. Considering size, weight, speed, and the **DJI Inspire 1** UAS will poses much less of a safety concern for the general public when compared to larger costly manned aircraft.

I, Omar Herrera, am experienced in building and flying remote controlled hobby helicopters for recreational purposes for over 22 years without any accidents. I currently have over 55 hours of remote control flying including additional DJI Pilot training for the **DJI Inspire 1** UAS. I'm also an insured member of the AMA (Academy of Model Aeronautics). Safety is my number one priority, therefore pre-flight inspections and post flight inspections are always performed as recommended by the manufacturer owner's manual and documented in a flight log.

The DJI Inspire 1 UAS has a maximum gross weight of 6 pounds 7.5 ounces, a length of 17.3 inches, width of 17.7 inches, height of 11.8 inches, and a maximum speed of approximately 42 knots. All photography and video of real estate will be taken at levels of approx. 200ft above ground level (AGL), at a speed less than 17 knots, and with a maximum flight time of 13.5 minutes allowing additional remaining return to home position flight time. **The DJI Inspire 1** UAS meets the definition of "small unmanned aircraft" found in section 331 "The Reform Act". **The DJI Inspire 1** UAS is battery powered there are no combustible fuels are onboard. Maximum flight time for the **DJI Inspire 1** UAS is approx., 18 minutes with a TB47, 4500mAh, 22.2 V LiPo 6S battery and approx., 22 minutes TB48, 57mAh, 22.8 V LiPo 6S battery. For safe a return, all flights are terminated with 25% battery life remaining. Given the size, weight, speed, and limited operating area associated with the aircraft to be utilized I find this exception to be reasonable with an equivalent, level of safety to be reached by the Pilot in Command (PIC).

I, Omar Herrera therefore, as Petitioner, pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012 (FMRA), Section 333, *Special Rules for Certain Unmanned Aircraft Systems,* hereby petitions the Administrator to commercially operate the **DJI Inspire 1** UAS in the National Airspace System (NAS), and for an exemption from the requirements of Regulations from 14 CFR Part 21 subpart H,14 CFR 45.23 (b),14 CFR 91.7 (a),14 CFR 91.9 (b) (2),14 CFR 91.103, 14 CFR 91.109, 14 CFR 91.119 (c), 14 CFR 91.121,
14 CFR 91.203 (a) and (b), 14 CFR 91.405 (a), 14 CFR 91.407 (a) (1),
14 CFR 91.409 (a) (2), 14 CFR 91.417 (a) and (b).

14 CFR Part 21 subpart H

In consideration of the speed, weight, size, and limited operating area associated with the UAS and its operation, the **DJI Inspire 1** UAS meets the conditions of FMRA Section 333 and therefore, I request exemption of an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

14 CFR 45.23 (b)

The **DJI Inspire 1** UAS does not have a cockpit, cabin, or pilot station on which to market certain words or phrases due its dimensions. However, in compliance with FAA regulations, the UAS's fuselage will be marked with lettering and/or "N" numbers as large as possible to identify the aircraft as required by the FAA ruling to preserve the equivalent level of safety and compliance.

14 CFR 91.7 (a)

The **DJI Inspire 1** UAS do not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Accordingly, I, Omar Herrera will submit and ensure that the DJI Inspire 1 UAS is always in airworthy condition, prior to every flight, by determining that the UAS is compliance with the operating documents for the **DJI Inspire 1** UAS, and pre-flight and maintenance logs for the aircraft's safe flight conditions.

14 CFR 91.9 (b) (2)

Due to the dimension and configuration the **DJI Inspire 1** UAS, the UAS does not have the means of to carry a flight manual on board. I, Omar Herrera, consequently request exempt from 14 CFR 91.9 (b) (2) because the flight manuals, are maintained within my reach at all times on the ground, both in print format and electronic "pdf " format with immediate access should it be necessary.

14 CFR 91.103

The **DJI Inspire 1** UAS does not have an FAA approved flight manual. However, I request exemption 14 CFR 91.103 because procedures for weather check, GPS satellites, flight battery levels, landing and take-off measurements, compass calibrations and other flight telemetry are found in the DJI Pilot App and provide an equivalent level of pre-flight protocols.

14 CFR 91.109

The **DJI Inspire 1** UAS does not have fully functional dual controls since it is remotely piloted via radio communications from the aircraft to a hand held transmitter. Since the **DJI Inspire 1** UAS does not carry a pilot or passengers the comparable level of safety and control is retained by the Pilot in Command (PIC).

14 CFR 91.119 (c)

In compliance with 14CFR 91.119, I, Omar Herrera as Pilot in Command (PIC), fly only within visual line-of-sight (VLOS) or the VLOS of a visual observer (VO) when required. The UAS remains at least 500 feet from other people in order to not pose an unwarranted hazard to persons and property. All flights are conducted during daylight-only hours (sunrise to sunset). Flights are never conducted from a moving vehicle. No flights are ever conducted within 5 miles of an airport. No flights are ever over 400 feet above ground level (AGL). No flights are ever less than 3 miles visibility from the home point.

14 CFR 91.121

The **DJI Inspire 1** UAS does not have a typical barometric altimeter onboard. However, altitude information is provided via Global Positioning System (GPS) equipment and radio communications telemetry data link, which is downlinked from the **DJI Inspire 1** UAS to the PIC's remote control screen actively monitoring the flight path. This altitude information, combined with other flight telemetry and flying the **DJI Inspire 1** UAS only within visual line of sight, and below 400 feet AGL, will ensure an equivalent level of safety. In addition should communications be lost at any point, the **DJI Inspire 1** UAS will automatically return to the home position (failsafe mode) via GPS, and will descend to the takeoff position and shutdown.

14 CFR 91.203 (a) and (b)
Given the similarities of, 14 CFR 91.9 (b) (2) Due to the dimension and configuration the **DJI Inspire 1** UAS, the UAS does not have the means of to carry a flight manual on board. An equivalent level of safety is maintained within my reach at all times on the ground by having the flight manuals in print format and electronic "pdf" format with immediate access should it be necessary.

14 CFR 91.405 (a), 14 CFR 91.407 (a) (1), 14 CFR 91.409 (a) (2), 14 CFR 91.417 (a) and (b)
Furthermore, I, Omar Herrera request relief from Sections 91.405(a),91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), as these sections set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate.

I, Omar Herrera, submit that the requested relief is appropriate since an equivalent level of safety will be ensured by performing preventive maintenance on the **DJI Inspire 1** UAS using the methods, techniques, and practices prescribed in the operating documents for the DJI Inspire 1. Furthermore, I document and maintain all flights and maintenance records for the **DJI Inspire 1** UAS and will made available for inspection by the FAA at any time upon request.

In consideration of the FAA grating me the above Section 333 Exemption Petition, I thank the FAA in advance for the efforts to stablish proper regulations and protocols for the use of UAS's within the national airspace. I further standby to support and cooperate with the FAA with any request regarding the public safety.

Thank you.

Sincerely,

Omar Herrera

Attachments: DJI Maintenance Manual, DJI Safety Guidelines, Flight/Maintenance Log Sheet