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

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

September 24, 2015

Exemption No. 12980
Regulatory Docket No. FAA−2015−2745

Mr. Davide Calda
2725 South Lockwood Ridge Road
Sarasota, FL 34239

Dear Mr. Calda:

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 on July 9 and August 25, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. You requested to operate an unmanned aircraft system (UAS) to conduct aerial photography.

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 Phantom 3.

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. Davide Calda 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

[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.

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, Mr. Davide Calda 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 Phantom 3 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 October 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

Docket Operations,

M-30 U.S. Department of Transportation

1200 New Jersey Avenue, S.E. Room W12-140,

West Building Ground Floor Washington, DC 20590-0001

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act 0f 2012 and CFR Part 11, DAVIDE CALDA, Videomaker and photographer, owner and operator of Small Unmanned Aircraft Systems (UAS's), request to be exempted from the Federal Aviation Regulations (FAR's) listed below so may operate UAS's commercially within airspace regulated by the FAA, as long as such operations are conducted within and under the conditions outlined here in or as may be established by the FAA as required by Section 333.

As described below, the requested exemption would permit the operation of light weight (less than 55 lbs. total take off weight) UAS's under controlled conditions for commercial use by myself thereby enhancing safety and fulfilling the Secretary of Transportation's responsibility to "establish requirements for safe operation of such aircraft systems in national airspace systems." Section 333(c), of the Reform Act.

Davide Calda's Drone is rotorcraft weighing less than 55 pounds including payload (DJI Phantom 3 Quad Copter). They operate at a speed less than 50 knots and have the capability to hover and move in the vertical and horizontal plane simultaneously. The DJI Phantom 3 has an auto return to the departure point when exceeding the manufacturers recommended distance from the controller, when the signal between the controller is lost or when battery power is under 25%. The UAS will be operated within "line of sight" in a protected flight area at 200' AGL or less. These operations will not create a hazard to users of the nations airspace or the public.

Davide Calda submits this application in accordance with the Reform Act, 112 P.L. 95 331:334, seeking relief from any currently applicable FAR's operating to prevent commercial use of small UAS's to operate in the national airspace system as described below. The Reform Act Section 332 provides for such integration of civil unmanned aircraft into our national airspace system as it is in the public's interest to do so. I meet the definition of "small unmanned aircraft" as defined by Section 331 and therefor the integration of theses UAS's are expressly contemplated by the Reform Act. I would like to operate it's light weight UAS's prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such aircraft. The Reform Act directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in national airspace before completion of the rule making required under Section 332 of the Reform Act. In making this determination, the Secretary of Transportation is required to determine which UAS's do create a hazard to users of the national airspace system or the public or pose a threat to national security in light of the following. The UAS's size, speed, weight and operational capability.

- Operation of the UAS's in close proximity to airports and populated areas.
- Operation of the UAS's within visual line of sight of the operator.

Reform Act 333(a). If the secretary determines that such vehicles "may operate safely in the National Airspace System, the secretary shall establish requirements for the safe operation in national airspace.

Davide Calda will be using rotorcraft weighing less than 55 lbs and operate at speeds less than 50 knots with the ability to operate in the vertical and horizontal plane simultaneously. The UAS's will operate only within "line of sight" of the operator within a protected flight area and at 200' AGL or less. This will not present a hazard to the national airspace or the public.

The very small nature of these UAS's combined with the safe guards presented below, will allow for the safe operation greater than that envisioned by Congress for the FAA to establish and by exemption allow commercial operations of UAS's to commence immediately. Also due to the size of UAS's and the areas and altitudes they will operate approval of this exemption presents no national security issues and absolutely minimal safety concerns which have been mitigated through our rigorous risk management process. Given the clear direction given in Section 333 of the Reform Act, the authority contained in the Federal Aviation Act, as amended, the strong equivalent level of enhanced safety, reduced emissions utilizing UAS's versus traditional aircraft as well as the economic impact of greatly reducing the cost of aerial photography thereby benefitting the greater public's interest. Accordingly, the applicant requests that the FAA grant the requested exemption without delay.

The following will be considered as the Standard Operating Procedures (SOP) :

1.Flights will only occur between sunrise and sunset.

2.Flights will be operated in the line of sight of the operator (PIC).

3.Flights will be terminated at any time weather and wind deteriorate to "unsafe for flight" based on manufacturer's limitations.

4.The UAS's will weigh less than 55 lbs.

5.Flights will be operated at less than 200' AGL.

6.The UAS's operator will perform a check of the flight area and make certain of the safety of all persons in the area.

7.Consent will be obtained from all persons within the video capabilities to ensure their privacy.

8.All required FAA clearances will be obtained and distances from airports strictly adhered too.

9.All UAS's will have the capability to return automatically to the operator in a safe manner with the auto return function checked and working.

10.Flights will only operate in VFR conditions.

11.UAS controllers display range and remaining battery power.

12.All preflight checks will be done prior to each flight.

13.All routine inspections and maintenance will be done in accordance as specified by DJI.

14 CFR, Part 21 Subpart H: Airworthiness Certificate 14 CFR 91.7 (a), 91.203(a)(1)

Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary certificates in relation to FAR 91.203(a)(1). The size, weight and defined area of operations for Drone View Aerial Photo UAS's flights permits exemption from Part 21 because they meet an equivalent level of safety pursuant to Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from airworthiness certificates in consideration of

weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. Davide Calda meets or exceeds each of these items.

As of March 23, 2015 the FAA has stated that it will automatically grant a "blanket" COA for flights at or under 200' AGL to any UAS operators with a Section 333 Exemption.

14 CFR, Part 91.203(a&b) provides for carrying of civil aircraft certifications and registrations. These are inapplicable for the same reasons stated above. The equivalent level of safety will be achieved by maintaining such certifications and registrations by Drone View Aerial Photo.

14 CFR, Part 91.7 (a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FAR's this regulation is inapplicable.

14 CFR, Part 91.9(b)(2) requires an "Civil Aircraft Flight Manual" in aircraft. As there are no pilots or passengers and given the size of the UAS's this regulation is inapplicable.

The FAA has previously issued exemptions to this regulation in Exemptions 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 332827.

14 CFR, Part 91.119 Minimum safe altitudes prescribes safe altitudes for operation of civil aircraft.. It allows helicopters to be operated at lower altitudes under certain conditions. Davide Calda will only operate it's UAS's at or below 200' AGL. They will be operated in a well defined area of operation that has been carefully reviewed for hazards and minimizes the presence of any persons not essential for these operations. Flights will only be over private property with the owner's consent.

Approval of these 333 Exemptions allowing commercial use of small UAS's in the service of aerial photography will greatly enhance safety by reducing the overall risk associated with traditional aircraft. Traditional aerial photography requires large aircraft with fuel potentially flying over or in close proximity to populated areas. With the use of small battery powered UAS's of 55 lbs or less the risk of injury to people on the ground is drastically reduced.

Granting Davide Calda the above exemption will allow for the expansion of the use of UAS's aircraft in the future for the safe conduct of free enterprise.

Davide Calda respectfully requests the FAA grant it's exemption without delay. The FAA has the authority to issue this exemption pursuant to the Federal Aviation Act, 85 P.L. 726 (1958) as amended (the act).

Sincerely,

DAVIDE CALDA VIDEOMAKER & PHOTO

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Sarasota 34239 FL

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Mr. Davide Calda

2725 South Lockwood Ridge Rd

Sarasota 34239 Florida

Petition under Section 333 of the FAA Modernization Act of 2012 (FRMA) for waiver of Airworthiness Certificate

Petitioner plans on operating an Unmanned Aircraft, more specifically a DJI Phantom 3 Professional, for the following purposes:

1. To take videos or photographs of homes, commercial buildings, land or lots for sale to be used in marketing said properties.
2. To Take video for Documentary, Wedding, Corporate.
3. To Take video for inspection of buildings, normally roof and gutters, for owners.
4. To inspect bridges, roads and railroads for maintenance purposes or such purposes requested by owners which may be government entities.
5. Aircraft may be used at times by the owner for recreational purposes for which the air certificate is not required.

Operation of the unmanned aircraft will:

1. Be by petitioner, a person over 17 years in age who is trained in the operation of the identified aircraft.
2. Be at altitudes not to exceed 500 feet above the ground.
3. Remain in visual line of sight of the operator.
4. Be flown close enough to the operator for the operator to be able to see the aircraft with vision unaided by any device other than corrective lenses.
5. Be flown only when the visibility is 3 or more miles from the operator.
6. Give due consideration for the safety of persons and property in the area of operation and the aircraft will not be flown over persons not involved in the operation.
7. Not be flown dangerously or recklessly.
8. Be flown only between sunrise to sunset
9. Yield right-of-way to other aircraft whether manned or unmanned.
10. Not be operated at a speed over 35 mph, the maximum speed of the aircraft..
11. Be operated only outside a 5 miles radius of any airport.

12. Only be undertaken after a preflight inspection as set forth in Manufacturer's **Safety Guidelines and Disclaimer** attached.

The DJI Phantom 3 Professional weighs less than 3 pounds, and has a top speed of 35 mph. It calculates speed, altitude and GPS information which is displayed on the operator's consol. It also has a "go home" capability which will return it to the GPS location the flight started from on command or when battery voltage decreases beyond a certain value.

Manufacturer certifies that the aircraft and its controls comply with part 15 of FCC Rules in **Safety Guidelines and Disclaimer** attached.

Petitioner seeks an exemption of the Airworthiness Certificate under the authority granted to the Secretary by Section 333.