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

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

September 2, 2015

Exemption No. 12721
Regulatory Docket No. FAA–2015–2078

Mr. Justin Rivera
Limitless Drones, LLC
3208 East Colonial Drive
Suite 108
Orlando, FL 32803

Dear Mr. Rivera:

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 posted to the public docket on June 4, 2015, and additional information dated June 4, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Limitless Drones, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography for real estate, and motion picture and television production.

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 are the DJI S1000, DJI S900, DJI Phantom 2, and 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] 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, Limitless Drones, LLC is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 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

[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.

and closed set motion picture and filming. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Limitless Drones, LLC is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI S1000, DJI S900, DJI Phantom 2, and 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 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

Limitless Drones, LLC
3208 E.Colonial Drive, Ste 108
Orlando, FL. 32803
info@limitlessdrones.com

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
Washington, DC 20590

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

To Whom It May Concern:

Limitless Drones, LLC, is a Florida Limited Liability Company doing business as Limitless Drones. We are writing pursuant to the FAA Modernization and Reform Act of 2012 (the Reform Act) and the procedures contained in 14 C.F.R. 11, to request that Limitless Drones, an owner and operator of small unmanned aircraft, be exempted from the Federal Aviation Regulations (FARs) listed below so that Limitless Drones may operate its small unmanned aircraft systems (UAS) commercially in airspace regulated by the Federal Aviation Administration (FAA).

Limitless Drones operates UASs under 55 pounds, all of which are manufactured by DJI a leader in the UAS industry. The proposed aircraft models are the S1000 with A2 flight controller, S900 with A2 flight controller, Phantom-2, and Inspire-1. All of these UASs have programmable return to home functions as well as programmable limitations for distance and altitude. All aircraft are GPS enabled with safety features such as altitude hold, return to home functions and in the case of the S1000 and S900, can operate with a malfunctioning motor.

Limitless Drones utilizes the DJI manufactured UASs primarily for the marketing of Real Estate, though they may be used for other cinematography uses such as television, water sports, agriculture, surveys, and by first responders. Limitless Drones only uses the most advanced UASs available, as safety is our number one concern.

Limitless Drones operation of small UASs has in the past proven key in providing imagery and video to foreign developers and investors, streamlining the production of new homes and resort developments in the Orlando area. Our services give a broader picture to investors who cannot readily travel to the area in order to inspect current build projects, allowing them to make key decisions from anywhere in the world. These operations benefit the public by bringing revenue and jobs into the local economy without delays on the investors and builders part. Limitless Drones UASs are also highly cost-effective when compared to helicopter operations. We have also proved instrumental in the sale and marketing of such properties once construction is completed.

Limitless Drones, LLC is owned and operated by Justin Rivera. Justin has 10 years of military aviation experience, holds a current class 2 medical certificate as well as a Private Pilot certificate. Justin is a graduate of Embry-Riddle Aeronautical University and has worked side by side with tier 1 military units piloting Scan Eagle UASs overseas gaining over 1700 flight hours in the field. Justin has experience coordinating airspace in real time with manned aircraft in some of the busiest military airfields such as in Bagram Air Base Afghanistan. Justin also has experience as an instructor for UASs as well as a maintenance chief while supporting military operations. With Justin's experience, Limitless Drones continues to have a safe and immaculate track record.

Limitless Drones, LLC
3208 E.Colonial Drive, Ste 108
Orlando, FL. 32803
info@limitlessdrones.com

Limitless Drones continues to look for ways to improve UAS safety through crew resource management training, situational awareness training, and analyzing human factors with regards to UAS operations.

Limitless Drones exemption request would permit its operation of lightweight, unmanned (piloted by remote control) and comparatively inexpensive UASs in tightly controlled and limited airspace under 400 feet. Predetermined, specifically marked areas of operation, cordoned off locations and corresponding enhancements to current safety controls will allow Limitless Drones to operate within current safety parameters while innovating new ones. Currently, amateurs with no flight experience, safety plan or controls in place to prevent catastrophe legally operate similar lightweight, remote controlled UASs. It is only logical to allow Limitless Drones highly experienced remote control pilots, technicians and safety crew to operate similar lightweight UASs. This will act to further safety protocols specific to lightweight UASs as Limitless Drones researches flight data and other information gained through permitted flight operations.

Granting Limitless Drones request comports with the Secretary of Transportations (FAA Administrators) responsibilities to not only integrate UASs into the national airspace system, but to establish requirements for the safe operation of such aircraft systems [UASs] in the national airspace system under Section 333(c) of the Reform Act. Further, Limitless Drones will conduct its operations in compliance with the protocols described herein or as otherwise established by the FAA.

For the reasons stated in our attached petition, Limitless Drones respectfully requests the grant of an exemption allowing it to operate lightweight, remote controlled UASs within the national airspace.

The following links provide details on the specific UASs that limitless Drones plans to operate including specs. Limitless Drones abides by all manufacturers guidelines which are also located at the following links:

S1000: http://www.dji.com/product/spreading-wings-s1000
S900: http://www.dji.com/product/spreading-wings-s900
Phantom 2: http://www.dji.com/product/phantom-2
Inspire-1: http://www.dji.com/product/inspire-1

If you require any additional information please do not hesitate to contact us at:
Info@limitlessdrones.com

Respectfully,
Justin Rivera, Owner
Limitless Drones, LLC
Justin@limitlessdrones.com
(407) 278-9200

3208 E. Colonial DR. STE 108
Orlando, FL 32803

June 4, 2015

US Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
Washington DC 20590

Exemption Request Pursuant to Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from: 14 CFR Part 21 Subpart H, 14 CFR 61.113(a) and (b), 14 CFR 91.103, 14 CFR 91.109, 14 CFR 91.119, 14 CFR 91.121, 14 CFR 91.151, 14 CFR 91.405, 14 CFR 407, 14 CFR 409, 14 CFR 417

To Whom It May Concern:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 C.F.R. Part 11, Limitless Drones, LLC, an operator of Unmanned Aircraft Systems ("UASs") for aerial photography and video for the real estate, motion picture and television industry, hereby applies for an exemption from the Federal Aviation Regulations ("FARs") to allow commercial operation of its UASs.

Limitless Drones, LLC's requested exemption would permit the operation of small, unmanned UAS under 55 pounds to conduct aerial video and photography under the Operational Control of an individual holding at least a Private Pilot certificate; under direct control of a Pilot in Command (PIC); within Visual Line of Sight (VLOS); while utilizing a second person for the purpose of a Safety Observer. As established by the exemptions already granted by the FAA, approval of Limitless Drones exemption would enhance safety and fulfill the Secretary of Transportation's (the FAA Administrator's) responsibilities to "...establish requirements for the safe operation of such aircraft systems in the national airspace system." Section 333(c) of the Reform Act.

The name and address of the applicant is:

Limitless Drones, LLC
Attn: Justin Rivera
PH: 407-278-9200
Email: Justin@LimitlessDrones.com
Address: 3208 E. Colonial DR STE 108 Orlando, FL. 32803

Regulations from which the exemption is requested:

14 CFR Part 21 Subpart H, 14 CFR 61.113(a) and (b),
14 CFR 91.103, 14 CFR 91.109, 14 CFR 91.119, 14 CFR 91.121,
14 CFR 91.151, 14 CFR 91.405, 14 CFR 407, 14 CFR 409, 14 CFR 417

UASs operated by Limitless Drones, LLC weigh less than 55 pounds, including the payload (i.e. camera, lens, and gimbal). They operate at speeds of no more than 50 knots, can hover, and can simultaneously move vertically and horizontally. Limitless Drones, LLC will only operate its UASs in line of sight below 400 feet AGL and will operate under the operational control of (at minimum) an FAA certified private pilot while maintaining a safety observer. Such operations will insure that the UAS will “not create a hazard to users of the national airspace system or the public.”

Given the small size of Limitless Drones, LLC’s UASs and the safety considerations proposed in this petition, Limitless Drones, LLC’s UAS operations adhere to the Reform Act’s safety requirements. Additionally, due to the size of the UASs and the proposed use in which they will operate, approval of this application presents no national security issues. Based on the level of safety surrounding the proposed operations, and the significant public benefit: Marketing and development of real estate, public awareness, reduction in environmental impacts by reduced emissions and noise, as well as an increase in revenue to the local economy through real estate development. The grant of the requested exemption is in the public interest. Accordingly, Limitless Drones, LLC respectfully requests that the FAA grant the requested exemption.

Aircraft And Equivalent Level Of Safety

The operating limitations proposed by Limitless Drones provide for at least an equivalent or higher level of safety because operations further enhance safety of real estate, movie, and television filming using conventional aircraft.

Limitless Drones Proposed limitations and conditions include:

• The UASs will weigh less than 55 pounds.

• Flights will be operated within line of sight of a pilot and/or observer. Maximum flight time for each operational flight will be 30 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 30 minute limit.

• Flights will be operated at an altitude of no more than 400 feet AGL, and not more than 200 feet above an elevated platform from which filming is planned.

• Minimum crew for each operation will consist of the UAS Pilot, and a visual observer.

• An FAA licensed airman with at least a private pilot's certificate and third class medical will oversee all flight operations to ensure the highest degree of safety.

• All UAS Pilots will undergo in-house training before operating any UAS for commercial use. This will include situational awareness training, airspace education, and proper operation of the proposed UAS.

• The UAS will be operated within a confined area pre programmed into the software, avoiding inadvertent fly-away or flight beyond set parameters.

• A briefing will be conducted for planned UAS operations prior to each day's flight. All personnel involved in the operations are required to attend.

• The operator will obtain consent of all persons involved in the filming and ensure that only consenting persons will be allowed within 50 feet of the flight operation.

• The operator will submit a written Plan of Activities to the FSDO three days

• All required permissions and permits will be obtained from territorial, state, county, or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.

• If the UAS loses communications or loses its GPS signal, the UAS will have the capability to return to a pre-determined location and land. The location will be clear of all persons or property during the duration of the flight.

• The UAS will have the capability to abort a flight in case of unpredicted obstacles or

emergencies.

- The UASs will operate on the following frequencies, which are all FCC compliant and do not require specific licenses when transmit power is limited to 1 watt: 902 to 928 MHz, 2.400 to 2.4835 GHz, and 5.725 to 5.875 GHz.

- The UASs will not operate in the proximity of airports.

14 C.F.R. Part 21, Subpart H: Airworthiness Certificates

Given the size and limited operating area associated with the UASs to be utilized by Limitless Drones, this meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C.§44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt the UASs from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UASs. In all cases, an analysis of these criteria demonstrates that a UAS operated without an airworthiness certificate, in a restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

14 C.F.R. § 61.113(a) and (b): Private Pilot Privileges and Limitation:

Pilot in Command Sections 61.113 (a) and (b) limit private pilots to non-commercial operations. Because the UAS will not carry a pilot or passengers, the proposed operations can achieve an equivalent level of safety of current operations by requiring all operations to be supervised by (at minimum) an individual holding private pilot's license rather than requiring that individual to hold a commercial pilot's license to operate a small UAS. Unlike conventional manned aircraft, a ground-based operator remotely controls a UAS. The operational area is limited, and all flights are planned and coordinated in advance. The level of safety exceeds that provided by a single individual holding a commercial pilot's certificate operating a conventional aircraft. The risks associated with the use of a UAS are far lower from those associated with commercial operations contemplated by Part 61. Allowing operational control of a UAS by a private pilot exceeds the present level of safety sought by 14 C.F.R. §61.113 (a) and (b).

14 C.F.R. § 91.103: Preflight Action

Section 91.103 requires each pilot to preflight an aircraft before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be used, an exemption is requested. However, an equivalent level of safety will be provided. The PIC will take all actions, including reviewing weather, airspace, NOTAMS, TFRs flight battery requirements, landing and takeoff distances, and performance data before commencement of flight. Additionally all UAS will be checked for security of attached components prior to every flight.

14 C.F.R. § 91.109: Flight Instruction

Section 91.109 states, “No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls.” The proposed UASs will be operated utilizing an autopilot to maintain controlled flight, and all UASs are programmed to return to a level attitude and hover when the controls are returned to a neutral position. Because of these built in safety features, dual control is not necessary in order to maintain an equivalent level of safety proposed by section 91.109 during training. All training will be conducted in a controlled environment as to not cause undue harm or damage to persons or property.

14 C.F.R. §91.119: Minimum Safe Altitudes

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119 provides, in pertinent part, that: “except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes...
(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.”

Because Limitless Drones, LLC requests authority to operate at altitudes only up to 400 AGL, and not more than 200 above an elevated platform from which filming is planned, an exemption is needed to allow such operations.

The equivalent level of safety will be achieved given the size, weight, and speed of the UAS as well as the location where it is operated. All affected individuals will be informed of the planned flight operations. Compared to flight operations for manned aircraft and the lack of flammable fuel, any risk associated with the proposed UAS operations is far less than conventional aircraft operating at or below 500 AGL. In addition, the low-altitude operations of the UAS will ensure separation between a UAS and conventional aircraft.

14 C.F.R. §91.121 Altimeter Settings

Section 91.121 requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set “...to the elevation of the departure airport or an appropriate altimeter setting available before departure.” As a UAS may not have a barometric altimeter, but instead reference a GPS altitude, an exemption is needed. The operator will achieve an equivalent level of safety, confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

14 C.F.R. §91.151: Fuel Requirements for Flight in VFR Condition

Section 91.151(a) prohibits an individual from beginning “a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed – (1) During the day, to fly after that for at least 30 minutes. . . .” The battery powering the proposed UASs provides approximately 30 minutes of powered flight. Therefore the UAS cannot meet the 30-minute reserve requirement in 14 CFR §91.151. In lieu of this requirement the UAS flights will be terminated at approximately 25% remaining battery life or better. Limitless Drones, LLC believes that an equivalent level of safety can be achieved by limiting flights to 25% of battery power, this restriction would be more than adequate to return the UAS to its pre-determined landing zone from anywhere in its limited operating range.

Limitless Drones, LLC is not seeking an exemption for night-time UAS operations.

14 C.F.R. §91.405: Maintenance Inspections

These regulations require that an aircraft operator or owner shall “have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter...,” and others shall inspect or maintain the aircraft in compliance with Part 43.

Given that these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to Limitless Drones operations. Maintenance will be accomplished by the operator in accordance with the manufacturers recommended procedures (attached). An equivalent level of safety will be achieved because the UASs are limited in size, will carry a small payload and operate only for limited periods of time. A preflight inspection will be performed prior to every flight to ensure no mechanical issues are present. If mechanical issues arise, the UAS can land immediately and will be operating from no higher than 400 feet AGL. The operator will ensure that the UAS is in working order prior to flight, and perform any required maintenance. Moreover, the operator is the person most familiar with the UAS and best suited to maintain it in an airworthy condition

14 C.F.R. §91.407: Operation after Maintenance

Functional check flights will be conducted away from people or property after any maintenance has been accomplished on the UAS. The UAS may be returned to service once it has been determined safe for flight.

14 C.F.R. §91.409: Inspections

Due to the small size of the UASs that will be operated by Limitless Drones, LLC and limited components, we request that the UASs be exempt from regularly

scheduled inspections. To meet an equivalent level of safety sought by 14CFR 91.409, all UASs will be thoroughly inspected prior to flight. Since the UASs will have limited components, a thorough inspection can be accomplished before each flight, eliminating the need for periodic, time based, or flight-hour based inspection cycles.

14 C.F.R. §91.417: Maintenance Records

As previously described**,** the UASs proposed size and use significantly limits the amount of maintenance required. The UASs that will be operated by Limitless Drones, LLC are designed by the manufacturer for the average hobbyist to purchase and fly with minimal assembly, regular preventative maintenance is limited to security of attached components and proper storage of, and charging of batteries. As such, Limitless Drones, LLC requests an exemption from maintaining maintenance records as prescribed by 14CFR 91.417. However, in order to operate as safely as possible, Limitless Drones, LLC will keep a running log of all maintenance performed on each UAS, and any anomalies noted during operation in order to diagnose and prevent problems with the UAS.

Summary for Publication

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

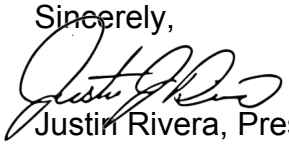
Limitless Drones, LLC seeks an exemption from the following rules:
14 CFR Part 21 Subpart H, 14 CFR 61.113(a) and (b), 14 CFR 91.103, 14 CFR 91.109, 14 CFR 91.119, 14 CFR 91.121,14 CFR 91.151, 14 CFR 91.405, 14 CFR 407, 14 CFR 409, 14 CFR 417 to operate commercially small unmanned vehicles (55 pounds or less) for aerial photography and video for the real estate, motion picture, and television industry.

As established by the UAS exemptions already granted by the FAA, allowing commercial operations of UASs in the real estate and film industry will enhance safety by reducing risk. Conventional film operations, using turbine aircraft, operate at low altitudes and present the risks associated with aircraft that weigh thousands of pounds, and carry large amounts of fuel. Such aircraft must also fly to and from the film location. In contrast, a UAS weighing fewer than 55 pounds and powered by batteries virtually eliminates all of that risk given the small size and lack of combustible fuel. The UAS is carried, and not flown, to a film location. In this regard, the UAS carries no passengers or crew, therefore will not expose anyone to the risks associated with manned flights. The operation of UASs conducted in accordance with this request will provide an equivalent level of safety supporting the grant of the exemption requested herein. The UASs operate at slow speeds, close to the ground, and within a limited range. As a result, they are far safer than conventional operations conducted with turbine helicopters carrying fuel and flying near the ground and people.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 (size, weight, speed, operating capabilities, proximity to airports and populated

areas and operation within visual line of sight and national security) provide more than adequate justification to grant Limitless Drones, LLCs requested exemption, allowing for Limitless Drones, LLC's UAS commercial operations for the real estate, motion picture and television industry.

Sincerely,



Justin Rivera, President/Owner
Limitless Drones, LLC.