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

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

September 2, 2015

Exemption No. 12720
Regulatory Docket No. FAA-2015-2508

Mr. Paul Craig Boutin
President
Aerial Video Solutions, Inc.
2304 W. Eagle Feather Road
Phoenix, AZ 85085

Dear Mr. Boutin:

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 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Aerial Video Solutions, Inc. (hereinafter petitioner or operator) 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 are the , DJI Phantom 2 Vision+, DJI Inspire 1, and Tarot 680PRO .

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, Aerial Video Solutions, Inc. 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. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, Aerial Video Solutions, Inc. 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 2 Vision+, DJI Inspire 1, and Tarot 680PRO 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

U.S. Department of Transportation Docket Management System
1200 New Jersey Avenue SE
West Building Ground Floor Room W12-140
Washington, D.C. 20590

RE: Petition for Exemption Under Section 333 of the Federal Aviation Administration Modernization and Reform Act of 2012, public 112-95 Feb. 14, 2012, Section 333

Dear Sir or Madam,

Pursuant to Section 33 of the FAA Modernization Act of 2012 and 14 CFR Part 11, **Aerial Video Solutions, Inc.** (**AVS**) operator of Small Unmanned Aircraft Systems (UAS), equipped to provide cost effective aerial imagery services, hereby applies for an Exemption from the listed Federal Aviation Regulations (FAR) to allow commercial Operations of it's UAS, so long as such operations are conducted within and under The conditions and limitations outlined herein or as may be established by the FAA As required by Section 333.

These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure specifically, a safety enhancement to aerial imagery and videography conducted by manned aviation operations

The use of UAS for aerial imagery and videography by **AVS** reduces the need for personnel to use manned aircraft activities to perform the same function. Therefore it is in the best interest of the Public for the FAA to approve the Requested exemptions.

The applicant, Paul Craig Boutin, for **Aerial Video Solutions, Inc.,** has been involved in aviation for 35 years and radio controlled vehicles for over 5 years. Currently holds a Commercial Pilots Certificate with an Instrument rating received in 1980. Formally educated at Embry Riddle Aeronautical University in Aeronautical Science. Paul has an in-depth understanding of the capabilities and safety concerns involved in this technology and that it has enormous potential benefit to the community.

Sincerely,

Paul Craig Boutin
President
Aerial Video Solutions, Inc. (**AVS**)
2304 w. Eagle Feather Rd.
Phoenix, AZ 85085
480-575-1156
pboutin321@msn.com

submitted: June 2nd, 2015

Requested Exemptions from Regulations:

14 C.F.R Part 21.185
Airworthiness Certificate
AVS recommends that in consideration of the size, weight, speed and limited operating area associated with these aircraft and their operation, the Secretary of Transportation determines that these aircraft meet the conditions of Section 333.

14 C.F.R. Part 45.23(b)
Display of marks
AVS UAS shall 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 will be as large as practicable.

14 C.F.R. Part 61.113(a)
Private pilot privileges and limitations
The FAA has found in previous grants of exemption that a PIC with a private pilot certificate operating a UAS would not adversely affect operations in the NAS or present a hazard to persons or property on the ground.

14 C.F.R. Part 61.133(b)
Commercial pilot privileges and limitations
The FAA has found in previous grants of exemption that a PIC with a private pilot certificate operating a UAS would not adversely affect operations in the NAS or present a hazard to persons or property on the ground.

14 C.F.R. Part 91.7(a)
Civil Aircraft Airworthiness
AVS recommends that in consideration of the size, weight, speed and limited operating area associated with this aircraft and its operation, the Secretary of Transportation determines that these aircraft meet the conditions of Section 333.

14 C.F.R. Part 91.9(b)(2) &(c)
Civil Aircraft Flight Manual, Marking, and Placard Requirements
The FAA has previously determined that relief from these sections is not necessary. Relevant materials may be kept in a location accessible to the PIC in compliance with the regulations.

14 C.F.R. Part 91.103
Preflight Action
As FAA approved flight manuals will not be provided for the aircraft an exemption will be needed. Normal procedures including but not limited to; reviewing weather, flight battery requirement, landing and takeoff distances, along will all of those found in attachment "DJI Pilot Training". An equivalent level of safety will be provided by preflight protocol (see attachment) to properly match the machine.

14 C.F.R. Part 91.109(a)
Flight Instruction
AVS will conduct all flight training through procedures specified in Training Instruction (see attachment) during dedicated training sessions. Based on previous decisions made by the FAA for UAS petitions regarding this regulation,

14 CFR 91.109
UAS and remotely piloted aircraft do not have fully functional dual controls. Flight control is achieved through the use of a control box that communicates with the aircraft via radio communications. The equivalent level of safety provided because neither a pilot nor passenger will be carried in the aircraft, and by the speed and size of the aircraft.

14 CFR 91.113 (a) and (b)
AVS can achieve an equivalent level of safety as achieved by current regulations because the UAS does not carry pilot nor passenger. While helpful, a pilots' license will not ensure remote control piloting skills.

14 C.F.R. Part 91.119(c)
Minimum Safe Altitude
Aircraft will be operated below 400 AGL, but not over congested areas.

14 C.F.R. Part 121
Altimeter Settings
The proposed aircraft have a barometric altimeter and GPS derived altitude capabilities. **AVS** recommends that the altimeter be set to zero feet AGL rather than local barometric pressure or field altitude before flight. Considering the limited altitude of the proposed operations.

14 C.F.R. Part 91.151(a)
Fuel Requirements in VFR
Prior relief has been granted for manned and unmanned aircraft to operate at less than prescribed minimums.

14 C.F.R. Part 91.203(a) and (b)
Certifications Required
Original intent of these regulations was to display an aircraft’s airworthiness, certification and registration documents so they would be easily available to inspectors and passengers. Based on the FAA Section 333 of the Reform Act, authorizes the FAA to exempt aircraft 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 UAS. In all cases, an analysis of these criteria demonstrates that the UAS operated without an airworthiness certificate, in the 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. Part 91.405(a)
Maintenance Required
Given these section only apply to aircraft with an airworthiness certificate, theses sections do not apply to this applicant. As a safety precaution, operator will perform preflight inspections and ensure UAS is in working condition before initiating each flight.

14 C.F.R. Part 91.407(a)(1)
Operation after Maintenance
Given this section only applies to aircraft with an airworthiness certificate, theses sections do not apply
to this applicant. As a safety precaution, operator will perform preflight inspections and ensure UAS is in working condition before initiating each flight.

14 C.F.R. Part 91.409(a)(1) and (2)
Inspections
Given this section only applies to aircraft with an airworthiness certificate, theses sections do not apply to this applicant. As a safety precaution, operator will perform preflight inspections and ensure UAS is in working condition before initiating each flight.

14 C.F.R. Part 91.417(a) and (b)
Maintenance Records
Given this section only applies to aircraft with an airworthiness certificate, theses sections do not apply to this applicant. As a safety precaution, operator will perform preflight inspections and ensure UAS is in working condition before initiating each flight.

Aerial Video Solutions, Inc. (AVS) is seeking relief from all FARs above preventing applicant from conducting cost effective aerial imagery services taken at levels less than 400ft, at a speed less than 33.5 mph, and with a maximum flight time of 25 minutes,. The UAS's proposed to be used are listed below are all under 35 pounds. The UAS meets the definition of "small unmanned aircraft system" found in section 333 "The Reform Act". In order to obtain high quality photography and video the UAS will be used at speeds much less than it's top speed of 33.5 mph. Due to the UAS being battery powered there are no combustible fuels onboard. Maximum flight time for this particular UAS is 25 minutes battery life, flights to be terminated with 25% battery life remaining. Given the size, weight, speed, and limited operating area associated with the aircraft to be utilized. **AVS** finds this exception to be reasonable with an equivalent, or greater, level of safety to be reached by the operator.

Public Interest:

Removal of human risk from flight operations.

AVS operations of UAS to perform aerial imagery and videography will reduce risk to life and property by decreasing the requirements of personnel to operate manned aircraft to perform these tasks.

AVS will use battery-powered UAS that serve as safe and efficient alternatives to the manned aircraft commonly utilized to conduct aerial imagery and videography.

Also, the flight data, inspection results, recorded observations and lessons learned from these operations will be compiled to further enhance its current safety program.

AVS proposes that the exemptions requested herein apply to civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure because the proposed operations represent a safety enhancement to aerial imagery and videography conducted by manned aircraft.

Reduction in gas emissions associated with powered flight.

Improvement upon cost efficiencies associated with manned flight.

National policy set by Congress favors early integration of UAS into the NAS in controlled, safe, working environments such as those proposed in this petition. In addition, the public also has an interest in reducing the hazards and emissions associated with alternate use of helicopters to conduct similar operations.

PRIVACY:

All flights will be conducted in accordance with any and ALL federal, state and local laws regarding privacy

AVS will voluntarily participate in the “NoFlyZone” registry and proactively stay current with updates - https://www.noflyzone.org/

Aircraft and Equipment requested to be used for compensation or hire:

All aircraft weigh less then 55 pounds

AVS proposes to use Four unmanned aircraft systems (UAS) for aerial video & still photography

DJI Phantom 2 Vision+ V2.0 Quad-Rotor - PIC will operate UAS in safe manner that will not pose threat to person or property and with assistance from a visual observer (VO)

DJI Phantom 2 Vision+ V3.0 - PIC will operate UAS in safe manner that will not pose threat to person or property and with assistance from a visual observer (VO)

DJI Inspire 1 - PIC will operate UAS in safe manner that will not pose threat to person or property and with assistance from a visual observer (VO)

Tarot 680PRO Six-Axis Hexacopter – Equipped with the DJI NAZ-M V2 Control, GPS and Navigation (same system as other DJI UAS). PIC will operate UAS in safe manner that will not pose threat to person or property and with assistance from a visual observer (VO)

AVS will use the following ground support equipment:

DJI laptop Ground Control Station (DJI aircraft)

DJI iPad Ground Control Station (DJI aircraft)

If the UAS loses communications or loses its GPS signal, it will return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operating documents.

Altitude awareness will be maintained via a radio communications telemetry data link, which downlinks from the aircraft to the PIC for active monitoring of the flight path. The altitude information will be generated by GPS equipment installed on the aircraft. Prior to each flight, a zero altitude initiation point will be established and confirmed for accuracy by the UAS PIC.

Pilot In Command:
Prior to commercial operations conducted for the purpose of aerial imagery and videography,

The PIC will:

Have a minimum of twenty hours of total time as a UAS pilot

At least ten hours logged as a UAS pilot with similar UAS type (quad or hex rotor)

Have a minimum of five hours as a UAS PIC operating the make and model of the UAS

Three take-offs and landings in the preceding 30 days.

Demonstrate DJI Pilot Training proficiency

AVS will not permit any PIC to operate unless the PIC meets the operator's qualification criteria and 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 will be logged. The VO will also be required to complete the operator's training requirements. A record of training will be documented and made available upon request by the Administrator

Visual Observer:

All operations will utilize a visual observer (VO). The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC will be able to communicate verbally at all times. Electronic messaging or texting will not be permitted during flight operations. The PIC will be designated before the flight. The PIC will not transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions prescribed in the operating documents. The VO will not perform any other duties beyond assisting the PIC with seeing and avoiding other air traffic and other ground based obstacles/obstructions and is not permitted to operate the camera or other instruments.

Training:

Will Include and require:

DJI Pilot / Flight Training Guide: (see attachment)

AVS Training guide (available upon request)

Maintenance:

AVS will carry out its maintenance, inspections, and record keeping requirements, in accordance with the manufacturer operating documents and manuals. Maintenance, inspection, alterations, and status of replacement/overhaul component parts will be noted in the aircraft records, including total time in service, description of work accomplished, and the signature of an authorized AVS person before returning the UAS to service.

Flight Operations:

All flights will occur under Visual Flight Rules Meteorological Conditions (VFR) only.

All operations must utilize a VO. The VO may be used to satisfy the Visual Line of Sight (VLOS) requirement.

The PIC and VO will have been trained in operation of UAS and receive up-to-date information for the particular UAS to be operated.

Mission planning will be accomplished prior to flight. A preflight briefing will be conducted by the PIC and VO, as well as with any other observers (company representatives, licensed inspectors, etc.) prior to commencement of operations.

PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight.

The Ground Control Station will be included in the preflight inspection.

All maintenance and alterations will be properly documented in the aircraft records. to each flight the PIC will inspect the UAS to ensure it is in a condition for safe flight

The UAS will be operated within visual line of sight (VLOS) of the PIC at all times.

The UAS will be operated at an altitude of no more than 400 feet above ground level (AGL),

UAS operations will not be conducted during night,

UAS will be operated with all manufacturer safety bulletins.

The UAS will not operate within 5 miles of an airport

The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

If the UAS loses communications with the remote controller or loses GPS signal, the UAS will have the capability to return to a pre-determined location within a designated location and land autonomously.

The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough power to fly at normal cruising speed to the intended landing point and land the UAS with 25% battery power remaining.

All operations shall be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

The UAS 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.

The UAS will not be flown at an indicated airspeed exceeding 30 knots.

The UAS may not be operated by the PIC from any moving device or vehicle.

The UAS must remain clear and give way to all manned aviation operations and activities at all times.

Operating characteristics and maintenance procedures are outlined in the attached operations-user manuals. The radio frequency spectrum used for operation and control of the UA will comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

AVS shall obtain all necessary consent and permissions prior to operation of those being filmed or an agreement to be in the designated filming area prior to filming taking place.

Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required, will 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.

Before conducting operations, the radio frequency spectrum used for operation and control of the UAS shall comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

Conclusion:

AVS requests a review of the aforementioned relief request at the earliest date practicable. We believe we have addressed all the requests and requirements set forth by Section 333 relief guidance and that our request is in line with previously approved relief requests. It is our recommendation that the Secretary of Transportation and FAA approve the exemption for Aerial Video Solutions, Inc., due to the favorability of the public interest and the ability of the exemption to provide a level of safety at least equal to that provided by the rules from which exception is being sought.

Sincerely,

Paul Craig Boutin
President
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480-575-1156
pboutin321@msn.com

ATTACHMENTS:

DJI Phantom2 User Manual - http://download.dji-innovations.com/downloads/phantom_2_vision_plus/en/Phantom_2_Vision_Plus_User_Manual_v1.8_en.pdf
DJI Inspire1 User Manual - http://download.dji-innovations.com/downloads/inspire_1/en/Inspire_1_User_Manual_v1.2_en.pdf
DJI Training Manual - http://download.dji-innovations.com/downloads/phantom_2_vision_plus/en/Phantom_2_Vision_Plus_Pilot_Training_Guide_v1.1_en.pdf
DJI Safety Guidelines - http://download.dji-innovations.com/downloads/inspire_1/en/Inspire_1_Safety_Guidelines_en.pdf
UAS Flight Log (sample)
AVS Protocols