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

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

August 18, 2015

Exemption No. 12498
Regulatory Docket No. FAA−2015−0918

Mr. Ryan Boucher
President
Michigan Aerial Videos, LLC
6186 Tanager Court
Kalamazoo, MI 49009

Dear Mr. Boucher:

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 April 3, 2015, May 6, 2015, and July 12, 2015 you petitioned the Federal Aviation Administration (FAA) on behalf of Michigan Aerial Videos, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and inspection.

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 Vision+, DJI Phantom Vision, DJI Phantom 3, and the DJI Inspire.

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, Michigan Aerial Videos, 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. 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, Michigan Aerial Videos, 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 Phantom Vision+, DJI Phantom Vision, DJI Phantom 3, and the DJI Inspire when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and

limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

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

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

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

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

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

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

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

Michigan Aerial Videos, LLC
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Info@michiganaerialvideos.com

April 3, 2015

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

Re: Request for Exemption Per PL 112-95 §333 from 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(a), 14 CFR 91.405(a), 14 CFR 91.407(a)(1), 14 CFR 91.409(a)(2), 14 CFR 91.417(a) and (b)

Dear Sir or Madam:

With that preface, pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("FMRA") and 14 C.F.R. Part 11, Michigan Aerial Videos, LLC , developer and operator of Small Unmanned Aerial Vehicles ("SUAVS") equipped to conduct aerial photography/Inspection/ included but not limited to the following Commercial Operations:

- Real Estate listings
- Yacht brokerage/listings
- Private events: weddings, parties, etc ...
- Commercials/promotions for businesses, communities, golf courses, marinas, resorts, etc.
- Agriculture: imaging for crop health and/or production estimates
- Private land owners: pictures/video of their property
- As needed/requested to support law enforcement and/or first responders

Petitioner hereby applies for an exemption from the listed Federal Aviation Regulations ("FARs") to allow commercial operation of its SUAVs, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333.

Please consider this a request for an exemption of the above applicable sections of title 14 CFR for Michigan Aerial Videos, LLC for the purpose of conducting commercial aerial survey and photography operations with its small Unmanned Aircraft System (sUAS) within controlled access airspace employing a comprehensive safety, training, and planning program. The employment of sUAS platforms for these missions should provide the FAA with good cause to find that these operations enhance safety by eliminating the need to use conventional aircraft in the sometimes unique environments where an sUAS would be particularly adept, but a conventional aircraft may pose a hazard to its crew and those on the ground.

Michigan Aerial Videos, LLC requests exemption from the following applicable regulations, pursuant to the Administrator's authority to grant exemptions contained in 49 U.S.C. § 106(f), 40113, and 44701:

14 CFR 21 Part 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(a),
14 CFR 91.405(a),
14 CFR 91.407(a)(1),
14 CFR 91.409(a)(2),
14 CFR 91.417(a) and (b)

OPERATION OVERVIEW

Our operations utilize sUAS in a manner that provides services not offered by manned aircraft or enhances the level of safety at which the tasks can be completed in manned aircraft

Examples of the proposed aerial photography operations include both real estate and insurance damage assessment. Both operations restrict the use of the sUAS to a small area typically encompassing a limited number of residential and commercial properties at a time. The areas in which the flight takes place can readily be protected with secured access by the staff of Michigan Aerial Videos. The structures on these properties provided sufficient protection from the sUAS and can be completed with much less risk than what would be assumed in a manned operation at low altitudes with flammable fuel.

Our intended film production operation would typically include both photography and videography for commercial purposes including real estate development and private events as well as promotional video and commercial production for businesses. These events are restricted to only the invited participants and are closed to the general public, providing the opportunity to operate only in an area where informed, consenting participants and personnel are present. By adhering to the restrictions and exemptions previously granted by the FAA Michigan Aerial Videos, LLC will be able to provide a level of safety equal to or greater than the manned aircraft that would typically provide these services.

Our survey operation includes the orthomosaic mapping of both agriculture and construction sites utilizing our sUAS rotorcraft flying pre-programmed grids that can be interrupted and returned to a safe landing zone by our FAA certified pilots at any time. Currently these operations are executed by

general aviation aircraft carrying hundreds of pounds of fuel and equipment flying at low altitudes and speeds. Our operation would greatly increase the level of safety, replacing large aircraft with an sUAS under 35 pounds and restricted to speeds no greater than 50 knots. These sites are areas that can readily be secured by Michigan Aerial Videos personnel and would not provide any additional risk to the general public.

These operations are similar to those of Aerius Flight whom the FAA granted exemption number 11240 under the regulatory docket no. FAA-2014-0894. This is similar in all material respects to relief previously reguested in Grand of Exemptions Nos 11062,011109, 1112, and 11213.

All of Michigan Aerial Videos, LLC operations will be performed by FAA licensed pilots with trained Visual Observers and, where necessary, Site Security Coordinators, in controlled and secured environments only after a safety assessment has been completed and risk mitigation practices reviewed

1 Minimum crew for each operation will consist of the sUAS Pilot, the Visual Observer and based on results of the safety assessment may include a security coordinator
2 sUAS pilot will must possess the appropriate airman certificate as prescribed by 14 CFR part 61 and a third class medical.
3 The UAS will only operate within a confined Flight Area
4 A briefing will be conducted in regard to the planned sUAS operations prior to each day's production activities. It will be mandatory that all personnel who will be performing duties within the boundaries of the safety perimeter be present for this briefing.
5 The operator will file a FAA Form 7711-1, or its equivalent, as modified in light of the requested exemption, with the appropriate Flight Standards District Office.
6 The operator will obtain the consent of all persons involved in the filming and ensure that only consenting persons will be allowed within 20 feet of the flight operation. This radius may be reduced further based upon an equivalent level of safety determination with the advanced permission of the relevant FSDO.
7 Pilot and observer will have been trained in operation of UAS generally and received up-to-date information on the particular UAS to be operated.
8 Observer and pilot will at all times be able to communicate by voice
9 All required permissions and permits that are required will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.
10 If the sUAS loses communications or loses its GPS signal, the UAS will have capability to return to a pre-determined location within the Security Perimeter and land.
11 The sUAS will have the capability to abort a flight in case of unpredicted obstacles or emergencies.

AIRCRAFT

Michigan Aerial Videos, LLC will operate variations of the four-rotor DJI Phantom Vision+, DJI Phantom Vision, and the DJI Inspire which are commercially available off-the-shelf sUAS. The sUAS are rotocopter configuration and will weigh no more than 35 pounds. They will operate no faster than 50 knots groundspeed. The aircraft are agile, having the ability to hover, and move about its three axes simultaneously. The aircraft will be operated below 400 feet Above Ground Level (AGL) and continuously within the Pilot in Command's (PIC) line of sight, so as to not create a hazard to users of the national airspace system or public. The aircraft are equipped with failsafe protocols that return the aircraft to a predetermined point and land if any abnormalities are present. Because of the sUAS' specifications and flight characteristics, it poses no threat to national security.

These limitations and conditions that Michigan Aerial Videos, LLC agrees to be bound to include:

1 The sUAS will weigh less than 35 lbs.

2 Flights will be operated within line of sight of a pilot and/or observer.

3 Maximum total 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.

4 Flights will be operated at an altitude of no more than 400 feet AGL.

AIRWORTHINESS CERTIFICATION

Manned aircraft conducting aerial photography operations can weigh thousands of pounds or more and are operated by an onboard pilot and may carry other onboard crewmembers, as well as carry large quantities of fuel. The petitioner's unmanned aircraft (UA) weighs less than 8 pounds, including payload. The pilot and crew will be remotely located from the aircraft. The limited weight and construction reduces the potential for harm to persons or damage to property in the event of an incident or accident. The risk to an onboard pilot and crew during an incident or accident is eliminated with the use of a UAS for the proposed operation.

Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. The UA carries no fuel, and therefore the risk of fire following an incident or accident due to fuel spillage is eliminated.

The petitioner's UAS has the capability to operate safely after experiencing certain in-flight contingencies or failures and uses a failsafe mode to return to home and land when connection is lost. The UAS is also able to respond to a loss of the global positioning system (GPS) or a lost-link event with pre-coordinated automated flight maneuvers. These safety features provide an equivalent level of safety compared to a manned aircraft holding a restricted airworthiness certificate performing a similar operation.

FLIGHT CREW

Flight Crew (14 CFR 61.113 (a) and (b)) Prior to flight, the PIC and Visual Observer (VO) ("flight crew") will have completed the qualification process as outlined in the operator's manual. The Pilot in Command will possess the appropriate airman certificate as prescribed by 14 CFR part 61 and a third class medical certificate and meet applicable recent flight experience requirements. The Visual Observer will be trained in accordance with the company's Flight Operations Manual and will undergo routine competency checks.

PREFLIGHT ACTION

In accordance with 14 CFR 91.103, the PIC will, at minimum, receive a weather briefing, survey the launch and recovery environments and review takeoff and landing distances and other applicable aircraft performance data, check the aircraft and ground station/transmitter battery levels, and brief the Visual Observer (VO) and any other supporting crew on the mission, safety, and contingencies. All flights will be conducted in Day VMC conditions. Minimum flight crew shall include the PIC, Visual Observer to assist with seeing-and-avoiding other aircraft, a Site Security Coordinator as determined by preflight risk analysis.

FLIGHT INSTRUCTION

Flight Instruction (14 CFR 91.109), No pilot or passengers will be carried aboard.
MINIMUM SAFE ALTITUDES Michigan Aerial Videos, LLC requests authority to operate at altitudes up to but not exceeding 400 feet AGL within a specifically defined, controlled, restricted perimeter per 14 CFR 91.119. Michigan Aerial Videos, LLC will establish and maintain a security perimeter for the purpose of protecting structures and people not associated with the operation. In establishing the security perimeter, Michigan Aerial Videos, LLC will receive the permission of the owner of the property upon which the ground crew will stage and above which the aircraft will operate, and at no time will the sUAS be operated directly over a person. Should the flight take place over public lands, Michigan Aerial Videos LLC will obtain the permission of the governing body of jurisdiction. Obtaining permission to operate will serve as notification to the property owner or governing body that operations will be taking place. The sUAS will be continuously operated at an altitude which will allow a safe descent and recovery should a mechanical issue arise.

ALTIMETER SETTING

The sUAS does not have a barometric altimeter but does have a GPS altimeter. In meeting 14 CFR 91.121, an equivalent level of safety provided is by preflight action where the PIC will compare the GPS altimeter with the MSL altitude of the safe operating perimeter as ascertained by applicable aeronautical and topographical charts and make an calibration as necessary.

FUEL REQUIREMENTS

Michigan Aerial Videos, LLC seeks exemption from 14 CFR 91.151(a). The sUAS is powered by a battery, which provides unto 30 minutes of powered flight. Because of the absence of flammable operating fluids, an sUAS would not pose the same level of risk as a conventional aircraft. All participants in safe operating perimeter have been informed and educated, and have indicated consent. All Michigan Aerial Videos, LLC PICs will terminate flights when remaining battery power level reaches 25%.

sUAS MAINTENANCE

Michigan Aerial Videos, LLC requests exemption from 14 CFR 91.405(a), 14 CFR 91.407(a)(1), 14 CFR 91.409(a)(2), 14 CFR 91.417(a) and (b). The sUAS does not have an airworthiness certificate. Michigan Aerial Videos, LLC will conduct all maintenance on the sUAS in accordance with the flight operations manual. All maintenance will be conducted by a trained Michigan Aerial Videos, LLC associate. Because of relatively small operating perimeter, any mechanical issues that may arise during flight could be quickly mitigated by terminating the flight.

PRIVACY

All applicable laws and regulations regarding privacy will be adhered to.

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 Michigan Aerial Videos, LLCs requested exemption, allowing for Michigan Aerial Videos, LLC's UAS commercial operations for the purpose of photography, film and survey pursuant to the confidential Flight Operations Manual included herewith.

Sincerely,

Ryan Boucher
President - Michigan Aerial Videos, LLC

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May 6, 2015

U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: ID: FAA-2015-0918-0001 additional information and amendment

Dear Sir or Madam:

We would like to amend our application to also include the DJI Phantom 3 aircraft to the list of aircraft that we will operate.

Please see the enclosed aircraft user manuals as well.

AIRCRAFT

Michigan Aerial Videos, LLC will operate variations of the four-rotor DJI Phantom Vision+, DJI Phantom Vision, DJI Phantom 3, and the DJI Inspire which are commercially available off-the-shelf sUAS. The sUAS are rotocopter configuration and will weigh no more than 35 pounds. They will operate no faster than 50 knots groundspeed. The aircraft are agile, having the ability to hover, and move about its three axes simultaneously. The aircraft will be operated below 500 feet Above Ground Level (AGL) and continuously within the Pilot in Command's (PIC) line of sight, so as to not create a hazard to users of the national airspace system or public. The aircraft are equipped with failsafe protocols that return the aircraft to a predetermined point and land if any abnormalities are present. Because of the sUAS' specifications and flight characteristics, it poses no threat to national security.

These limitations and conditions that Michigan Aerial Videos, LLC agrees to be bound to include:

1 The sUAS will weigh less than 35 lbs.
2 Flights will be operated within line of sight of a pilot and/or observer.
3 Maximum total 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.
4 Flights will be operated at an altitude of no more than 500 feet AGL.

Sincerely,

Ryan Boucher
President - Michigan Aerial Videos, LLC

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6186 Tanager Court
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July 12, 2015

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

Re: Additional information for Request for Exemption Per PL 112-95 §333 from 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(a), 14 CFR 91.405(a), 14 CFR 91.407(a)(1), 14 CFR 91.409(a)(2), 14 CFR 91.417(a) and (b)

Dear Sir or Madam:

Please see the additional information requested regarding the benefit to the public interest in granting my exemption request.

Michigan Aerial Videos, LLC will be using battery powered UAS for operations that would normally be used by full size aircraft. The battery operated UAS does not release greenhouse gas emissions and have lower noise levels reducing the risk to the public and an overall benefit to the public interest. In addition these aircraft can replace work that is dangerous and difficult at the same time providing an equivalent or greater level of safety than alternative manned aircraft. By providing services that would normally be provided by manned aircraft, Michigan Aerial Videos will not only reduce emissions but may eliminate the need for an aircraft carrying flammable aircraft fuel to fly over the populated areas which would benefit the public interest.

Manned aircraft conducting aerial photography operations can weigh thousands of pounds or more and are operated by an onboard pilot and may carry other onboard

crewmembers, as well as carry large quantities of fuel. The petitioner's unmanned aircraft (UA) weighs less than 8 pounds, including payload. The pilot and crew will be remotely located from the aircraft. The limited weight and construction reduces the potential for harm to the pubic or damage to property in the event of an incident or accident. Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. The UA carries no fuel, and therefore the risk of fire following an incident or accident due to fuel spillage is eliminated which would benefit the public not only by the elimination of a crew but also the public on the ground at the site of the incident or accident. The risk to an onboard pilot and crew during an incident or accident is eliminated with the use of a UAS for the proposed operation and will benefit the public.

In conclusion, by granting Michigan Aerial Videos an exemption it would benefit the pubic as a whole and be in the best interest of the public.

Sincerely,

Ryan Boucher
President - Michigan Aerial Videos, LLC