



Federal Aviation Administration

August 19, 2015

Exemption No. 12531 Regulatory Docket No. FAA–2015–1332

Mr. Jeremy Hintz Sensorflight, LLC 3141 FM 3512 Aransas Pass, TX 78336

Dear Mr. Jeremy Hintz:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letters dated April 24, 2015, and July 16, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Sensorflight, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, cinematography, videography, mapping, crop surveying, inspections, and other flight operations.

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, DJI Phantom 2 Vision, DJI Phantom 2 Vision+, DJI Inspire 1, DJI S-1000, and DJI Spreading Wings S-1000.

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 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<sup>1</sup>. 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, Sensorflight, 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.

<sup>&</sup>lt;sup>1</sup> 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, Sensorflight, 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 2, DJI Phantom 2 Vision, DJI Phantom 2 Vision+, DJI Inspire 1, DJI S-1000, and DJI Spreading Wings S-1000 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

Jeremy Hintz Sensorflight, LLC 3141 FM 3512 Aransas Pass. TX 78336

Apr. 24, 2015

Phone: 830-734-2346 Fax: 361-758-7182

Email: jhintz@sensorflight.com

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

RE: Exemption Request Section 333 of the FAA Reform Act of 2012
The UAS proposed by the petitioner are the DJI Phantom 2, DJI Phantom 2 Vision, DJI Phantom 2 Vision+, DJI Inspire 1, DJI S-1000 and DJI Spreading Wings S-1000.

References: 1) FAA Exemption No. 11138, Regulatory Docket No. FAA-2014-0481 in the matter of the petition of DOUGLAS TRUDEAU

- 2) FAA Exemption No. 11136, Regulatory Docket No. FAA–2014–0508 in the matter of the petition of ADVANCED AVIATION SOLUTIONS LLC
- 3) FAA Exemption No. 11080 Regulatory Docket No. FAA-2014-0355 in the matter of the petition of FLYING CAM INC
- 4) FAA Exemption No. 11398 Regulatory Docket No. FAA-2015-0145 in the matter of the petition of VENTUS WIND LLC
- 5) FAA Exemption No. 11405 Regulatory Docket No. FAA–2015–0118 in the matter of the petition of BRYAN CHERRY

Dear Sir or Ma'am,

In accordance with the FAA's *Guidelines for Submitting a Petition for Exemption under section 333 of the FAA Modernization and Reform Act of 2012*, Sensorflight LLC, referred to hereafter as the petitioner, request exemption from the following sections of Title 14, Code of Federal Regulations §§

61.113(a); 61.113(b); 91.119(c); 91.121; 91.151(a); 91.405(a); 91.407(a)(1); 91.409
(a)(1); 91.409(a)(2); 91.417(a) & (b);

In order to operate small unmanned aircraft systems (UAS) commercially in airspace regulated by the Federal Aviation Administration (FAA) for the purposes of aerial photography, cinematography, videography, mapping, crop surveying, inspections and other flight operations that could be performed safely and more cost effectively with the

use of small UAS at low altitude within the U.S. national airspace system as compared to a manned aircraft. Operations will be performed only at the request of and with the authorization and permission of clients or their authorized agents in order to facilitate commerce and raise awareness of the beneficial uses of small unmanned air systems. 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. The conditions identified and proposed by the petitioner are drawn from references 1-5.

## The FARs

The petitioner seeks exemption from the above mentioned FARs for the following reasons:

- **61.113(a) & (b)**; The petitioner requests relief in order to facilitate the utilization of pilots, who hold a SPORT PILOT (or greater) certificate. Any pilots operating under this exemption would be required to comply with any conditions as set forth and in a similar fashion to the previously granted exemptions.
- **91.119(c)** As discussed in Exemption 11138 (DOUGLAS TRUDEAU), operations conducted closer than 500 feet to the ground may require that the UA be operated closer than 500 feet to essential persons, or objects that would not be possible without additional relief. The petitioner requests modification, waiver or exemption and clarification concerning the terms "congested areas" and "densely populated". The petitioner requests waiver for this condition to allow reasonable and responsible operations in areas of subdivisions and neighborhoods if required.
- **91.121** As discussed in Exemption 11138 (DOUGLAS TRUDEAU) is inapplicable since the UAS does not have an altimeter and instead utilizes electronic GPS with a barometric sensor for altitude information.
- **91.151(a)** As discussed in Exemption 11136 (ADVANCED AVIATION SOLUTIONS LLC) prior relief has been granted for manned aircraft to operate at less than the prescribed minimums, including Exemption Nos. 2689, 5745, and 10650. In addition, similar UAS-specific relief has been granted in Exemption Nos. 8811, 10808, and 10673 for daytime, VFR conditions. The UAS provides battery power remaining in percent to the PIC. The UA batteries provide approximately 25 minutes of powered flight. Information provided in the operating documents discusses procedures regarding remaining battery power management. Those documents contain a condition in which the PIC will initiate a landing procedure when battery remaining reaches a specified

level. Given the limitations on proposed operations and the location of those proposed operations, The FAA found that a reduced minimum power reserve for flight in daytime VFR conditions was reasonable.

91.405(a); 91.407(a)(1); 91.409 (a)(1) & (2); 91.417(a) & (b) As discussed in Exemption 11138 (DOUGLAS TRUDEAU), The petitioner proposes to inspect and ensure that the UAS is in a condition for safe flight in accordance with the operating documents. The FAA found that adherence to the petitioner's operating documents and the conditions and limitations specified, describing the requirements for maintenance, inspection, and recordkeeping, were sufficient to ensure that safety would not be adversely affected.

### The UAS

Reference Exemption No. 11398 (Ventus Wind, LLC) and their petition submitted January 20, 2015, the The UAS proposed by the petitioner are the DJI Phantom 2, DJI Phantom 2 Vision, DJI Phantom 2 Vision+, DJI Inspire 1, DJI S-1000 and DJI Spreading Wings S-1000.

# **Risk mitigation**

The petitioner has reviewed FAA exemptions reference's 1-5 *Conditions and Limitations* section and believes that the procedures specified therein are reasonable

and will be utilized in order to manage and mitigate risk and ensure public safety. A preflight checklist will be developed and employed to ensure that the UA airworthiness will be verified before launch. Airworthiness will be maintained by performance of routine inspections before each flight, maintaining flight and maintenance logs to record time on failure-prone components.

The petitioner request that in a manner similar to reference 3, he be allowed to operate within 5 miles of an airport provided that;

"The UA may not operate in Class B, C, or D airspace without written approval from the FAA. The UA may not operate within 5 nautical miles of the geographic center of a nontowered airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. The letter of agreement with the airport management must be made available to the Administrator upon request."

Operations within 5 miles of an airport are not anticipated to be routine but the petitioner is requesting a mechanism to facilitate such activities without requesting a new and separate exemption(s) should the need arise. Operations within class B airspace are not requested due to the lack of mode C transponder.

### **Public interest**

Use of the UAS in lieu of a manned aircraft would enhance safety and reduce the environmental impact as compared to similar operations conducted with manned aircraft of greater proportions, carrying a crew and flammable fuel. Additionally, use of the UAS in order to facilitate commerce could lead to economic growth. Operations for this petition will enable service for property owners or their designees seeking an enhanced perspective for characteristics, amenities, and benefits of their desired photographic subjects that cannot be displayed through ground level videography/photography. Aerial photography is a valuable marketing tool that can lead to increased commerce and enhance personal photography. Crop surveying applications could lead to decreased use of pesticides and fertilizer and conservation of water as well as increased crop yields and decreased costs. Aerial surveying and inspections can increase work site efficiency, improve volumetric estimations and reduce risks. The petitioner will provide clients with photographic data for these purposes on a 'for hire' basis acting as an independent contractor. A visual observer will be utilized. Liability insurance will be

obtained commensurate with the granting of this request for exemption. Flight data including UA flight time, Control Unit operation time, incident, accident, and details concerning any deviations from normal operations will be available to FAA for use in collecting data regarding the use of UAS as part of this application. This data may be submitted to FAA via traditional means, e.g. COA Monthly Reports, or other means as required.

### Conclusion

The petitioner is requesting this exemption for the purposes of "aerial photography, cinematography, videography, mapping, crop surveying, inspections and other flight operations". The reason for such a general and broad based request is that the petitioner wishes to utilize a business strategy of horizontal integration and maximize economies of scope in order to capitalize on opportunities as they may arise in the future without the long turnaround time associated with additional exemptions. The petitioner's business model is based on the idea of offering ad hoc small UAS services to individuals or companies who wish to employ these services as a safe, effective, and legal option to enhance their business or hobby. The petitioner's own market research shows pent up demand for these services currently exists in the real estate market and other markets are just beginning to emerge. Although videography and photography are included in the request, the primary objective will be aerial survey of farm crops for precision agriculture. The petitioner has identified universities and other agencies that could benefit from the operation requested in this application.

A quick internet search will show that many are currently operating similar UAS in exactly this fashion without, it is assumed, FAA authorization. The petitioner has refrained from engaging in commercial use of the UAS. The primary purpose of seeking this exemption is to obtain the capability to offer those services while remaining in compliance. The petitioner has 27 years of experience in the radio control model aircraft hobby, 20 years experience in general, military, and commercial aviation and holds an airman certificate, AIRLINE TRANSPORT PILOT, as well as a current second class medical certificate.

Respectfully submitted,

Jeremy Hintz Sensorflight, LLC TO: Brittany Newton Program Analyst, Airmen and Airspace Rules Division

This letter is in response to your letter dated 1 July 2015 pertaining to a request for additional information. The following information will explain how our petition for exemption will not adversely affect safety, and site other exemptions to further support our request.

14 C.F.R Part 11.81 (e)- The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which petitioner seeks the exemption:

Using UAS technology to collect photographic/videography data is beneficial to the public as a whole as it significantly risks to workers who must scale heights to collect information (risk of fall), it reduces risks to the public as a whole due to the reduction of helicopters and small aircraft as the UASs carry no combustible materials on board. Battery Powered UASs serve as a safe, efficient and economical alternative to manned aircraft traditionally used for capturing aerial images. They provide high levels of safety to person and property since no pilot or crew need to be airborne. UASs provide greater operational flexibility and reduced costs. Better aerial imagery can be obtained by using UASs due to their small size, maneuverability and flight performance characteristics. Less time is needed in the air to obtain the footage, thereby reducing the number of aircraft in the NAS. Reduction of noise will benefit the public as well. Finally, the UAS industry is expected to grow to \$11.5B by 2024 (military and civilian), which ultimately will contribute to the US economy by creating jobs and increasing consumer spending.

The use of UASs can significantly reduce the risk to workers of falls while inspecting, surveying, or monitoring sites. UASs can inspect, photograph, and collect data on hard to access areas that otherwise would require worker inspection. Falls are a leading source of workplace fatality and injury on construction sites and reducing falls through UASs use for site imaging could save workers lives. Additionally, UASs could replace the use of helicopters and small aircraft to monitor sites. The UASs we propose to fly in this application are less than 25 pounds, and carry no combustible material on board, as opposed to the much larger conventionally powered small aircraft. Shifting to UASs from helicopters presents a marked safety increase for our workers and the public. Lastly, UASs reduce the environmental impact by dramatically decreasing the energy used for aerial imaging and data collection over a construction site. Our UASs use rechargeable batteries, as opposed to fossil fuels burned in operation of small aircraft that are many hundreds of times heavier.

The operating limitations proposed by Sensorflight provide for at least an equivalent or higher level of safety because the operations further enhance the safety of aerial digital imaging over using conventional aircraft. In addition to following all instructions as provided by the manufacturer, Sensorflight shall include the following conditions and limitations in all operations:

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

- 2) Flights will be terminated at 20% battery power reserve.
- 3) Flights will be operated at an altitude of no more than 400ft AGL
- 4) Flights will only be operated in reasonably safe environments that are strictly controlled, are away from airports, power lines, elevated lights, and/or actively populated areas.
- 5) A briefing will be conducted for planned UAS operations prior to each flight.
- 6) Consent will be obtained from all persons involved in the operation and only authorized personnel will be allowed within 500 feet of the flight operation.
- 7) Written permission will be obtained from the relevant property owners.
- 8) If the UAS loses communications, the UAS will be placed in "Return to Home" mode and will return to its point of takeoff.
- 9) The UAS flight will be aborted should circumstances arise that created a potential hazard to person or place.
- Any additional information, views, or arguments available to support your request

Reference from similar granted exemptions:

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.

I believe that our petition is 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 our presented petition and we feel a grant of exemption is in the public interest.

Respectfully,

Mr. Jeremy Hintz Sensorflight, LLC

3141 FM 3512

Aransas Pass, TX 78336