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

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

August 11, 2015

Exemption No. 12426
Regulatory Docket No. FAA–2015–1956

Mr. James T. Aarestad
Eagle Eye Photos LLC
3234 Afton Avenue NE.
Buffalo, MN 55313

Dear Mr. Aarestad:

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 May 14, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Eagle Eye Photos LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial video and photography of real estate, special events, film sets, and construction sites.

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 2 Vision +.

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, Eagle Eye Photos 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

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

the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Eagle Eye Photos 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 Vision + 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

UNITED STATES OF AMERICA

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

Petition for Exemption 14 CFR 11.81

IN THE MATTER OF THE PETITION FOR EXEMPTION OF EAGLE EYE PHOTOS LLC FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF TITLE 14 OF THE CODE OF FEDERAL REGULATIONS SECTIONS PART 21 SUBPART H, 91.103(b), 91.105, 91.109, 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), AND 91.417(a) & (b) CONCERNING COMMERCIAL OPERATION OF DJI PHANTOM 2 VISION+ UNMANNED AIRCRAFT SYSTEMS PURSUANT TO SECTION 333 OF THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)

Submitted on May 14th, 2015

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SUMMARY

James T. Aarestad, the owner of Eagle Eye Photos LLC, seeks exemption from the requirements of 14 C.F.R § 91.103(b), 91.105, 91.109, 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), AND 91.417(a) & (b) to operate an Unmanned Aircraft System pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). This exemption will allow Eagle Eye Photos LLC to operate an Unmanned Aircraft System (UAS) for the commercial purpose of conducting aerial video and photography of real estate, special events, film sets and construction sites within the United States.

INTRODUCTION AND INTERESTS OF THE PETITIONER

Eagle Eye Photos LLC is a professional aerial photography firm that has been in operation since 1991. Using tethered blimps and aircraft, we have provided our clients with high quality aerial photos for commercial, personal, and non-profit organizations. With over 24 years in the business, Eagle Eye Photos has established itself as a leader in precision aerial photography in the Midwestern part of the United States. The company owner, James T. Aarestad, is an Airline Transport Pilot with 10 years experience in flying remotely controlled aircraft. If this petition is granted, James T. Aarestad will be the PIC directly responsible for the operation of the UAV. James T. Aarestad has over 8,000 hours of flight time in manned fixed wing aircraft and holds a current FAA first class medical certificate. Additionally, James T. Aarestad owns over 30 UAVs and has logged hundreds of hours of UAV flight time for recreational use. This combination of experience makes the operator well versed in the technical and regulatory aspects of UAV operations.

BACKGROUND

Eagle Eye Photos LLC seeks an exemption to operate DJI UAV systems for compensation or hire within the National Airspace System. Eagle Eye Photos LLC desires to operate a DJI Phantom 2 Vision+. This Unmanned Aerial Vehicle is a four bladed “quad” copter allowing for vertical takeoff and landing. The unit is powered by a Lithium Polymer battery which supplies power to four of the engines. It is controlled wirelessly through a Ground Control Station allowing it to be operated using a remote and an electronic tablet or smart phone system. The DJI Phantom 2 Vision+ has a max speed of 29 knots, a maximum gross weight of approximately 2 pounds 11 ounces, with dimensions of 16 inches by 16 inches standing 8 inches tall. The DJI Phantom 2 Vision+ complies with all FCC radio frequency regulations. Eagle Eye Photos LLC can provide a FCC compliance letter upon request.

If this petition is granted, the DJI Phantom 2 Vision+ that will be operated by Eagle Eye Photos LLC will be registered in accordance with 49 U.S.C. 44103, Registration of Aircraft,

and 14 C.F.R Part 47, Aircraft Registration, and marked in accordance with 14 C.F.R. Part 45, Identification and Registration Marking.

THE SPECIFIC SECTIONS OF 14 C.F.R. EAGLE EYE PHOTOS LLC SEEKS EXEMPTION AND THE REASONS WHY GRANTING THIS EXEMPTION WOULD NOT ADVERSELY AFFECT SAFETY.

Petitioner, Eagle Eye Photos LLC, pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012 (FMRA), Section 333, Special Rules for Certain Unmanned Aircraft Systems, hereby petitions the Administrator to commercially operate the DJI Phantom 2 Vision+ in the National Airspace System (NAS), and for an exemption from the following requirements:

-14 C.F.R. Part 21, Subpart H

Based on its size, weight and speed it meets the conditions of FMRA Section 333 and therefore, will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

The Reasons Why Granting The Exemption Would Not Adversely Affect Safety:

Eagle Eye Photos LLC believes that safety will not be affected without an airworthiness certificate because the process of obtaining an airworthiness certificate is geared toward the certification of manned aircraft and not small UAVs. Small UAVs, like the DJI Phantom 2 Vision+ are in a separate category of aircraft, as FMRA Section 333 recognizes.

-14 C.F.R 91.103 (b)

Eagle Eye Photos LLC seeks an exemption from the requirements of Section 14 C.F.R. 91.103(b) entitled Preflight Action. If this petition is granted, Eagle Eye Photos LLC will be operating a DJI Phantom 2 Vision+ which does not require a runway. The DJI Phantom 2 Vision+ takes off vertically without a runway. Therefore it is impossible for the PIC to calculate runway takeoff and landing distances.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.103(b) Would Not Adversely Affect Safety.

Eagle Eye Photos LLC believes that safety will be enhanced without the need for a runway. Additionally, the size and weight of the DJI Phantom 2 Vision+ is so small, that any takeoff or landing accident would cause minimal damage to persons or property when compared to manned aircraft takeoff and landing accidents.

-14 C.F.R 91.105

Eagle Eye Photos LLC seeks an exemption from the requirement of Section 14 C.F.R. 91.105, entitled flight crew members at stations. Because this is an Unmanned Aerial Vehicle, it is operated from the ground. Therefore, the operator has no need to wear seat belts while flying. Eagle Eye Photos LLC believes the UAV can be safely operated from the Ground Station and still maintain safety of flight.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.105 Would Not Adversely Affect Safety.

Eagle Eye Photos LLC believes that UAVs are much safer because the PIC is safely on the ground. Any inflight turbulence does not affect the safety of the PIC. In the event of a crash, the PIC risks significantly less physical damage from the DJI Phantom 2 Vision+ than he or she would inside a manned aircraft during a crash. For these reason, Eagle Eye Photos LLC believes that safety is actually improved by operating a UAV instead of a manned aircraft.

-14 C.F.R 91.109

Eagle Eye Photos LLC seeks an exemption from the requirement of Section 14 C.F.R. 91.105, entitled Flight Instruction; Simulated instrument flight and certain flight tests. Eagle Eye Photos LLC believes that all forms of flight instruction given on the UAV can safely be given using a dual operator ground station. Using two remotes, the instructor has the ability to override the student if needed, ensuring the instructor has full control over the UAV at all times while given flight instruction. Without this exemption, it would be impossible for Eagle Eye Photos LLC to give any type of UAV flight instruction.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.105 Would Not Adversely Affect Safety.

Eagle Eye Photos LLC believe that the same level of safety will be maintained during flight instruction because the instructor has full control at all times while giving flight lessons. In the event that the student begins the lose control, the instructor can take over, exactly like it is done in manned aircraft.

-14 C.F.R 91.121

Eagle Eye Photos LLC also seeks an exemption from the requirements of Section 14 C.F.R. 91.121, entitled Altimeter Settings, as the DJI Phantom 2 Vision+ does not have a barometric altimeter. The DJI Phantom 2 Vision+ altimeter may be set on the ground to zero feet AGL, rather than the local barometric pressure or field altitude, before each flight. Altitude information is provided to the Pilot in Command via the telemetry data link. This information is displayed to the Pilot in Command via the ground station tablet interface. This altitude information, combined with visual line of sight will ensure a level of safety equivalent to that of Section 14 C.F. R. 91.121.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.105 Would Not Adversely Affect Safety.

Eagle Eye Photos LLC believe that safety will still be maintained because the PIC still has altitude information available to him or her at all times during the flight. This, combined with attitude and ground speed information keeps the PIC situationally aware of the UAV and its surroundings.

-14 C.F.R 91.151(b)

Eagle Eye Photos LLC seeks an exemption from the requirements of Section 14 C.F.R. 91.151(b), entitled Fuel requirements for flight in VFR conditions. Eagle Eye Photos LLC believes that the standard Lithium Polymer batteries that power the DJI Phantom 2 Vision+. will be adequate for the short flights needed for this operation. The DJI Phantom 2 Vision+ has enough battery power to fly for a total duration of approximately 13 minutes with an additional 5 minutes of reserve power for additional flying at normal speed. Eagle Eye Photos LLC seeks the requested relief because without an exemption from Section 91.151(b), it would not be possible to fly a DJI Phantom 2 Vision+. This would severely constrain the practicality of any aerial video or still photo flight operations that Eagle Eye Photos LLC proposes to conduct pursuant to this Petition.

Furthermore, safety will be ensured as the DJI Phantom 2 Vision+ UAV provide audible and visual warnings to the PIC at the ground station when the UAV experiences low battery voltage, the first warning occurring at approximately 33% remaining battery power, and again at approximately 10% remaining battery power. At the critically low battery level, the DJI Phantom Vision+ UAV will descend and land automatically.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.105 Would Not Adversely Affect Safety.

Eagle Eye Photos LLC believes that safety will still be maintained because the DJI Phantom 2 Vision+ would always be flown within line of sight. This ensures that a landing can immediately be made within seconds or minutes. Additionally, the ability to takeoff or land vertically allows the DJI Phantom 2 Vision+ to land on virtually any flat surface. This ensures that the DJI Phantom 2 Vision+ will have plenty of battery reserves allowing it to always be able to safely land after a flight.

-14 C.F.R 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), 91.417(a) & (b).

Eagle Eye Photos LLC requests relief from these sections as these sections set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate. Eagle Eye Photos LLC requests relief from these Sections because the DJI Phantom 2 Vision + does not require airworthiness certificates as set forth in the conditions of FMRA Section 333.

A maintenance logbook will be developed to record all maintenance, alterations or repairs made on the UAV. Prior to any revenue flight, the PIC will be required to determine the DJI Phantom 2 Vision+ UAV in a manner consistent with this exemption.

Eagle Eye Photos LLC will use trained technicians to perform maintenance, alterations, or preventive maintenance on the UAVs using the methods, techniques, and practices prescribed in the UAV operating documents (Monthly Maintenance Log, and DJI Phantom 2 Vision+ Instruction Manual). Furthermore, Eagle Eye Photos LLC will document and maintain all maintenance records for the DJI Phantom 2 Vision+.

Eagle Eye Photos LLC submits that it will ensure that the DJI Phantom 2 Vision+ UAV are in an airworthy condition, prior to every flight, by determining that the UAVs are in compliance with the operating documents (Maintenance Log, and DJI Phantom 2 Vision+ Instruction Manual), and that the aircraft is in a condition for safe flight.

Reasons Why An Exemption From The Requirements Of Section 14 C.F.R. 91.105 Would Not Adversely Affect Safety.

Eagle Eye Photos will carefully and meticulously operate the DJI Phantom 2 Vision+ in accordance with the manufacturer's operating manual. The exemption sought will not adversely affect safety because Eagle Eye Photos LLC will use trained technicians to perform maintenance, alterations or preventive maintenance on the UAV using the methods, techniques, and practices prescribed by the operating documents. Eagle Eye Photos LLC believes that safety will not be affected because the procedures established above ensure the the DJI Phantom 2 Vision+ will always be maintained and operated in a structured, organized and consistent manner. Using the procedures above ensures that each flight is taken with the utmost care.

The Reasons Why Granting Eagle Eye Photos LLC's Request Would Be In The Public Interest AND How It Would Benefit The Public As A Whole.

Reason #1. Expanding the availability of affordable aerial photos for industry

Granting this petition will further the public interest by expanding the availability of economically affordable aerial cinematography and photography. Historically, the public has used aerial photos for a variety of reasons. These aerial photos and videos have been obtained using manned aircraft, costing hundreds and thousands of dollars per hour to operate. Granting this petition will increase the quality of aerial photography services, while at the same time decreasing the price. This service will allow for the following:

-enhanced and dynamic real estate marketing, benefiting property owners and real estate agents

-crop surveying for the agricultural industry (field drainage monitoring, crop insurance documentation, pesticide monitoring, etc), which will lead to increased farming efficiency benefiting both farmers and consumers

-Insurance claim documentation for insurance companies such as hail damage, crop damage, bridge collapses, flooding, etc., which will benefit the insurance companies and consumers of insurance products

-construction progress for residential, commercial, and industrial construction companies.

-wetland and water drainage mitigation for public works departments, which will enhance the ability of civil engineers to plan for water drainage mitigation

-power line and pipeline utility inspection services for utility companies

-many more potential applications exist

The increased efficiency and lower cost of operating a UAV for aerial applications will benefit the economy as a whole by allowing scarce resources, such as aircraft fuel, to be used in other areas of the economy. This will ensure that the United States remains competitive on the global market for aerial applications and ensure that more jobs stay located within the United States.

Reason #2. Reduced Levels of Air and Noise Pollution

Using the DJI Phantom 2 Vision+ UAV, to conduct aerial operations instead of manned aircraft will greatly benefit the public by reducing the levels of air and noise pollution. Small UAVs are much more energy efficient than traditional manned aircraft. By using battery power and electric motors, the DJI Phantom 2 Vision+ UAV produces no air pollution, and is much more environmentally friendly that the traditional four to six cylinder internal combustion aircraft engines that are typically utilized for aerial video and photography. These manned aircraft burn approximately 10-25 gallons per hour of leaded aviation fuel. The DJI Phantom 2 Vision+ UAV also eliminates a lot of noise pollution. The small propeller blades and electric motors produce only a fraction of the noise level that traditional fixed-wing aircraft or helicopters produce.

Reason #3 Increased Public Safety

The Public Will Benefit From The Safety And Efficiency Of The DJI Phantom 2 Vision+ UAV. The DJI Phantom 2 Vision+, weighing only 2 pounds 11 ounces, poses a very small threat to people and property on the ground in the event of a crash. The damage a 2 pound UAV can do is very small compared to the damage that a 4000 lb aircraft with hundreds of gallons of fuel onboard. In other words, it has less physical potential for collateral damage to life and property compared to manned aircraft.

Reason #4. Reduced Congestion of the National Airspace System

Granting this request also benefits the public as a whole by reducing the congestion of manned aircraft, leading to decreased congestion of the NAS. By reducing the number of manned aircraft operating in the NAS, it will relieve the air traffic control system of unnecessary aircraft traffic. Because the DJI Phantom 2 Vision+ UAV does not need a runway or airport to operate, it would result in fewer aircraft that must be handled by air traffic control during the ground, takeoff, departure, arrival, and landing phases of flight operations. This will allow the air traffic control system to focus their resources more on the needs of other types of manned flights.

How Eagle Eye Photos LLC plans to operate the UAV if this petition is granted.

If this petition is granted flights Of DJI Phantom 2 Vision+ UAV Will Be Conducted according Specific Operating Limitations

1. The UAV 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.

2. The UAV must be operated at an altitude of no more than 200 AGL

3. The UAV 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.

4. All operations must utilize a safety observer (SO). The SO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The SO 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 SO can perform the functions prescribed in the operating documents.

5. The SO must 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.

6. The operating documents and the grant of exemption must be accessible during UAV operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations contained in the grant of exemption and the procedures outlined in the operating documents, the conditions and limitations contained in the grant of exemption take precedence and must be followed.

7. Prior to each flight the PIC must inspect the UAV to ensure that it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAV, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAV is found to be in a condition for safe flight. The Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

8. Any UAV that has undergone maintenance or alterations that affect the UAV operation or flight characteristics, e.g. replacement of a flight critical component, must undergo a functional test flight. The PIC who conducts the functional test flight must make an entry in the aircraft records.

9. The pre-flight inspection must account for all potential discrepancies, e.g. inoperable components, items, or equipment, not already covered in the relevant sections of the operating documents.

10. The operator must carry out its maintenance, inspections, and record keeping requirements, in accordance with the operating documents. Maintenance, inspection, alterations, and status of replacement/overhaul component parts must be noted in the aircraft records, including total time in service, description of work accomplished, and the signature of the authorized person returning the UAV to service.

11. Each UAV operated under this exemption must comply with all manufacturer Safety Bulletins.

12. UAV operations may not be conducted during night, as defined in 14 C.F.R. § 1.1. All operations must be conducted under visual meteorological conditions (VMC). If flight at night is required, a special request will be made at the FAA office closest to proposed area of operations. Flights under special visual flight rules (SVFR) are not authorized.

13. The UAV may not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart, or within the lateral limits of class B, C or D airspace as denoted on a current FAA-published aeronautical chart.

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

15. The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.

16. 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 UA with 25% battery power remaining.

17. All aircraft operated in accordance with the exemption must be identified by serial number, registered in accordance with 14 C.F.R. part 47, and have identification (N-Number) markings in accordance with 14 C.F.R. part 45, Subpart C. Markings must be as large as practicable.

18. The UAV must remain clear and yield the right of way to all manned aviation operations and activities at all times.

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

20. Flight operations must be conducted at least 500 feet from all nonparticipating persons (persons other than the PIC, SO, operator trainees or essential persons), vessels, vehicles, and structures unless: a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UAV 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 UAV, flight operations must cease immediately and/or; b. The aircraft is

operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission 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, and; c. Operations nearer to the PIC, SO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).

21. 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.

Flight safety will be maintained because the PIC operating the DJI Phantom 2 Vision+ is already a ATP pilot and has demonstrated that the PIC is able to safely operate the DJI Phantom 2 Vision+ UAV in a manner consistent with safe operation, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

Eagle Eye Photos LLC will not allow any PIC to operate the DJI Phantom 2 Vision+unless that PIC has demonstrated, that he or she that the PIC is able to safely operate the DJI Phantom 2 Vision+ UAV in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

Technical Specifications Of The DJI Phantom 2 Vision+ UAV.

Eagle Eye Photos desires to operation a DJI Phantom 2 Vision+. This Unmanned Aerial Vehicle is a four bladed "quad" copter allowing for vertical takeoff and landing. The unit is powered by a Lithium Polymer battery which supplies power to four of the engines. It is controlled wirelessly through a Ground Control Station allowing it to be operated using a remote and an electronic tablet or smart phone systems. The DJI Phantom 2 Vision+ has max speed of 29 knots, a maximum gross weight of approximately 2 pounds 11 ounces, with dimensions of 16 inches by 16 inches standing 8 inches tall. The DJI Phantom 2 Vision+ complies with all FCC radio frequency regulations. Eagle Eye Photos LLC can provide a FCC compliance letter upon request. The DJI Phantom 2 Vision+ UAV Autonomous Flight And Navigation Modes Enable The UAV To Remain Within A Defined Operational Area. The DJI Phantom 2 Vision+ UAV may be operated in both manual and fully autonomous flight modes. A complete description of the flight and navigational modes of the DJI Phantom 2 Vision+ UAV is provided at pages 25-35 of the DJI Phantom 2 Vision+ User Manual (see attachment) The DJI Phantom 2 Vision+ UAV Are Designed For Automatic Return To Home Point Or Hover In The Event Of Loss Of The Control Link Or Navigation. When the Control Link is lost, the DJI Phantom 2 Vision+ UAV will remain stationary, in flight, for 3 seconds or more. If, after 3 seconds, the DJI Phantom 2 Vision+ UAV does not reacquire control link data from the GCS, the UAV will assume that the Control Link is lost and the UAV will return to the home position (i.e., failsafe mode) via GPS, and will descend to the takeoff position and shutdown.

A complete description of the Failsafe Functions of the DJI Phantom 2 Vision+ UAV are set forth at pages 27 through 29 of the DJI Phantom 2 Vision+ User Manual (see attachment) A complete description of the operation and specifications of the DJI Phantom 2 Vision+ GCS and flight control software is provided at pages 32 through 43 of the DJI Phantom 2 Vision+ User Manual.

Considering the size, weight, speed and operation capability, Eagle Eye Photos LLC believes the DJI Phantom 2 Vision+ UAV does not create a hazard to users of the NAS or the public, or otherwise pose a threat to national security. For further techincal information concerning the DJI Phantom 2 Vision+, see the attached operators manual

CONCLUSION

Eagle Eye Photos LLC seeks an exemption pursuant to 14 C.F.R. § 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of the DJI Phantom 2 Vision+ UAV commercially, without an airworthiness certificate, for the limited purpose of conducting aerial video and photography over certain areas of the United States. By granting this Petition, the FAA Administrator will be fulfilling the Congressional mandate of the FAA Modernization and Reform Act of 2012, while also advancing the interests of the public, by allowing Eagle Eye Photos LLC to safely, efficiently, and economically operate the DJI Phantom 2 Vision+ commercially within the NAS.

In accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, Eagle Eye Photos LLC respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections 91.103(b), 91.105, 91.109, 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), AND 91.417(a) & (b) to operate the DJI Phantom 2 Vision+ UAV commercially for the purpose of conducting aerial video and photography over certain areas of the United States.

Dated: May 14th, 2015

Respectfully submitted,

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