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

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

July 30, 2015

Exemption No. 12246
Regulatory Docket No. FAA–2015–2025

Mr. Michael T. Melton
President and CEO
Birdseye, LLC
10436 East Capercaillie Street
Tucson, AZ 85747

Dear Mr. Melton:

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 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Birdseye, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial data acquisition.

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 the 3D Robotics Iris+.

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, Birdseye, 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, Birdseye, 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 3D Robotics Iris+ 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 July 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

May 17, 2015

US Department Of Transportation

Federal Aviation Administration

800 Independence Ave SW

Washington DC 20591

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (Reform Act) and 14 CFR Part 11, Birdseye LLC, owner and operator of Small Unmanned Aircraft Systems (UAS), request to be exempted from the Federal Aviation Regulations (FARs) listed below, so that Birdseye LLC may operate small UASs commercially in airspace regulated by the FAA., as 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 name and address of the applicant is:

Birdseye LLC

Michael T. Melton, President / CEO

10436 E Capercaillie St, Tucson, AZ 85747

Email: mmelton88@gmail.com

Phone: 773-799-1548

Birdseye LLC is owned by Michael T. Melton and Jose Perez. Michael T. Melton will be the PIC and has an Arizona Driver's license and has a Bachelor's degree in Aeronautical and Astronautical Engineering (AAE) from the University of Illinois at Urbana Champaign (UIUC). Michael also earned a Masters in Business Administration (MBA) from the University of Illinois at Chicago (UIC). Michael went through background checks and screening with the US Customs and Border Protection's Trusted Travelers Program to receive his Global Entry, and Sentri Pass. He is a member of the Rotary Club of Tucson and is an individual of high character. Michael has over 14 months experience flying small UASs and over 10 years experience in the Irrigation Industry and holds a certification from the Irrigation Association recognizing him as a Certified Golf Irrigation Auditor (CGIA). He is a member of the Academy of Model Aeronautics (AMA) and has completed their safety training modules on flying small UASs and is enrolled in a FAA NPRM compliant ground school certification program offered through Fly Robotics (Appendix E). He is very familiar with the safety requirements for piloting a small UAS, and

can perform all the required maneuvers safely. All operations will be performed with the public's safety and right to privacy safeguarded at all times.

As described below, the requested exception would permit the operation of light weight (less than 55 lbs. total takeoff weight) small UASs under controlled conditions for commercial use by the PIC. All flights will be conducted in daylight keeping the PIC in direct line of sight (VLOS) of the small UAS at all times thereby enhancing safety and fulfilling the Secretary of Transportation's (the FAA Administrator's) responsibility to "establish requirements for safe operation of such aircraft systems in national airspace systems." Section 333(c), of the Reform Act.

Birdseye small UASs are rotorcraft weighing less than 55 pounds including payload (3D Robotics IRIS+). They operate at a speed less than 50 knots and have the capability to hover and move in the vertical and horizontal plane simultaneously. The typical weight of the IRIS+ small UAS and payload is 3.5 lbs and the typical speed is 3.4 mph (3 knots). They have an auto return to launch point when battery power is under 25%. The small UAS will operate within the line of sight of the PIC and at 400 feet AGL or less as described in Appendix A (Drone Safety). These operations will not create a hazard to users of the national airspace, public, nor the environment.

Birdseye LLC submits this application in accordance with the Reform Act ,112 P.L. 95 331-334, seeking relief from any currently applicable FAR'S operating to prevent Birdseye LLC future commercial use of small UASs to operate in the national airspace system as described below. The Reform Act section 332 provides for such integration of civil unmanned aircraft into our national airspace system as it is in the public's interest to do so. Birdseye LLC's small UASs meet the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of these UASs are expressly contemplated by the Reform Act. Birdseye LLC would like to operate its lightweight UASs prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such aircraft.

Birdseye LLC will be using the small UASs for a number reasons that are in the public's interest. These include but are not limited to gathering data to help in the effort to conserve water use. Both Arizona where we are located and neighboring California are experiencing record drought conditions. Birdseye LLC will use technology that will help small farmers, parks officials, and golf course superintendents make better choices with regards to water use. Water conservation and education will be part of our mission. We are also interested in partnering with organizations such as the Rotary Club to find ways to use this technology to help improve the public's knowledge of proper water use and help those in need. We envision being able to help in search and rescue efforts if requested by state and local officials.

The Reform Act directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in national airspace before completion of the rulemaking required under Section 332 of the Reform Act. In making this determination, the Secretary of Transportation is

required to determine which UASs do create a hazard to users of the national airspace system or the public or pose a threat to national security in light of the following:

The UASs size, speed, weight and operational capability

Operation of the UASs in close proximity to airports and populated areas

Operation of the UASs within visual line of sight of the operator

Reform Act 333(a). If the secretary determines that such vehicles "may operate safely in National Airspace System, the secretary shall establish requirements for the safe operation in national airspace.

Birdseye LLC are rotorcraft weighing less than 55 lbs. with operational speed of less than 50 knots, and the capability to operate in the vertical and horizontal plane simultaneously. The small UASs will operate only within the line of sight of the operator at 400 feet AGL or less. Additional safety measures will be taken and failsafe features are built into the small UASs we will operate (see Appendix A). These will not present a hazard to the national airspace nor the public. The operations manual for our small UAS has been included as Appendix B.

The very small nature of these UASs combined with the safeguards presented below, will allow for the safe operation greater than that envisioned by Congress for the FAA to establish and by exemption allow commercial operations of UASs to commence immediately. Also due to the size of small UASs and the areas and altitudes they will operate approval of this exception presents no national security issues and absolutely minimal safety concerns which have been mitigated through our rigorous risk management process. Given the strong equivalent level of enhanced safety, reduced emissions utilizing small UASs versus traditional aircraft, as well as the economic impact of greatly reducing the cost of aerial photography it is in the public's interest to approve this exemption. The applicant requests that the FAA grant the requested exemption without delay.

LIMITATIONS ON OPERATIONS OF BIRDSEYE LLC:

1. Flights will only occur in the day time hours,
2. Flights will be operated in visual line of sight (VLOS) of the operator (PIC).
3. Flights will be terminated at any time weather and wind deteriorate to "unsafe for flight" by manufacturers recommendations,
4. The UASs will weigh less that 55 lbs.,
5. Flights will be operated at 400 feet AGL or less.
6. The UASs operator will perform a check of the flight area and make certain of the safety of all persons in the area.

7. The PIC will perform a preflight check that will include the following:

a. Verify props are in good condition (no stress whitening or visible damage)
b. Verify battery is fully charged and in good condition
c. Spin props and verify that motors spin freely
d. Verify that props are tight even though they are a self tightening design
e. Power up the transmitter and UAS
f. Verify GPS lock
g. Connect to ground station
h. Verify proper connection between ground station and UAS
i. Slowing throttle up UAS to verify motors are in good working condition.
j. Take off and hover, verify functionality of controls (forward, back, spin CW and CCW, ascend, descend).

Additional details can be found in Appendix C.

8. Ground station software (Mission Planner) will be in use to monitor the exact position, altitude (AGL), and ground speed of the UAS (average speed of 3.4 mph or 3 knots most common). The Ground Station will be able to communicate any errors to the PIC. Additional details can be found in Appendix D.
9. All flights will take place at a minimum distance of 5 miles from any airport as required.
10. All UASs will have the capability to return automatically to the operator in a safe manner with the auto return function checked and working.
11. All UASs will have failsafe measures that will cause the craft to land if battery power is less than 25%.
12. Flight team will communicate by voice and the use of two-way radio if the area is too big to hear voice from all team members.
13. UASs will be used take photos and / or videos of sparsely populated farmland or land containing turf grass.
14. The PIC will yield right of way to other aircraft, manned or unmanned.

Birdseye LLC respectfully requests the grant of an exception to the following specific sections of the Title 14 Code of Federal Regulations allowing it to operate lightweight UASs for commercial use.

REGULATIONS FROM WHICH THE EXEMPTION IS REQUESTED:

14 CFR Part 21

14 CFR 45.23 (b)

14 CFR 61.3

14 CFR 61.113 (a) & (b)

14 CFR 61.133 (a)

14 CFR 61.315 (a)

14 CFR 91.7 (a)

14 CFR 91.9 (b) (2)

14 CFR 91.109 (a)

14 CFR 91.119

14 CFR 91.121

14 CFR 91.151 (a)

14 CFR 91.203 (a) & (b)

14 CFR 91.405 (a)

14 CFR 91.407 (a) (1)

14 CFR 91.409 (a) (2)

14 CFR 417 (a) & (b)

The FAA has previously issued exemption to these regulations in Exemptions No 11599, 11600, 11062, 11109, 11213, 11571, 11510, 11596.

14 CFR Part 21

This section covers certification procedures for products and parts. Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary certificates. The size, weight and defined area of operations for Birdseye LLC small UASs flights permits exemption from Part 21 because they meet an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 USC 4470(f) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt small UASs from airworthiness certificates in consideration of weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. Birdseye LLC meets or exceeds each of these elements

14 CFR 45.23 (b)

This section requires the display of markings and gives suggestions for the size of the markings. However because of the small size of the UAS applicable markings will be made to fit the small UAS. An exemption is requested in order to mark the small UAS with smaller characters as suggested in the FAA's proposed Small UAS NPRM.

14 CFR 61.3

This section requires certifications for piloted flight. Since Birdseye LLC's small UAS is not capable of lifting a pilot or any living thing this should not apply as written. A Birdseye LLC PIC will need to complete a FAA equivalent ground school certification program such as the one provided by Fly Robotics. Our PIC will be required to have a minimum of 25 hours of flight experience with a small UAS, with at least 10 hours piloting the same type of small UAS prior to any commercial flight. This experience will include demonstrating the ability to pilot the IRIS+ UAS in manual and autonomous modes and the ability to switch modes during a flight and return the craft to the ground safely. The Operations Manual for the IRIS+ shows maneuvers including a figure eight that must be satisfactorily demonstrated in manual flight mode. In addition to the required hours of flight experience and training listed above Birdseye LLC will be using a ground station to help control the aircraft. A predetermined flight path will be programmed into the small UAS greatly simplifying role of the PIC. The PIC will at all times have the ability to take manual control of the small UAS if needed. Flights will be governed by the section above called "LIMITATIONS ON OPERATIONS OF BIRDSEYE LLC" (pg 3). These provisions are enough to provide equivalent levels of safety for the public and the PIC.

14 CFR 61.113 (a) & (b); 61.133 (a); 61.315 (a)

These sections covers private pilot, commercial pilot, and sports pilot privileges and limitations regarding the PIC (pilot in command). Because the UAS will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety by adhering to the required training and flight times listed in the section above (25 hours of flight experience on small UAS). Unlike a normal aircraft the small UAS is not carrying any living thing and therefore cannot endanger the lives of those individuals. Demonstrating proper control of the small UAS using the proper controller and ground station software is far more likely to lead to a successful and more importantly safe completion of a flight.

14 CFR 91.7 (a)

This prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable for this aircraft and given the size of the small UAS and limited conditions of use this exemption should be granted. The PIC will be responsible for a preflight examination of the craft as mentioned in this document to determine if the small UAS is airworthy.

14 CFR 91.9 (b) (2)

This section states "For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof". Because there is no pilot on board and no room on the small UAS for a flight manual this should be exempt. An

equivalent level of safety will be achieved by keeping these documents at the Birdseye LLC operations center.

14 CFR 91.109 (a)

This section provides that no person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls. The small UAS used by Birdseye LLC (IRIS+) and most other small UASs by design do not possess dual controls. They are remotely piloted aircraft via radio communications from a single control box.

14 CFR 91.119

Minimum safe altitudes, prescribes safe altitudes for operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. Birdseye LLC will only operate its small UASs at or below 400 AGL. They will be operated over a predefined space that has been previously reviewed for any hazards. Onsite visits will be conducted to verify no dangers to the craft, PIC or the public exist. Permission will be obtained from the site's facility before flying UASs in the predefined space. Compared to flight operations of conventional and traditional aircraft or rotorcraft weighing far more than 55 lbs., operating below 500 AGL with flammable fuel small UAS operations present a far smaller risk to the public and therefore an equivalent level of safety.

14 CFR 91.121

This section describes the use of an altimeter to maintain level flight however the small UAS used by Birdseye LLC does not have an altimeter. Instead it used GPS to determine its altitude. The small UAS used by Birdseye LLC will always be connected to a ground station where the AGL is always displayed. A barrier will be set by the software to prevent flights above 400 ft AGL, therefore we request an exemption to 14 CFR 91.121.

14 CFR 91.151 (a)

This section describes the fuel requirements for flight in VFR conditions. Since the section requires flight times of 30 minutes and the small UAS used by Birdseye LLC has an average flight time of 20 minutes an exemption is required. There is a setting on the small UAS used by Birdseye LLC that will trigger an automated landing of the small UAS if less than 25% of the batter life remains. In addition Birdseye LLC will not fly our UAS at night as stated in the "LIMITATIONS ON OPERATIONS OF BIRDSEYE LLC" (pg 3), therefore the increased fuel requirement at night also does not apply. This will prevent hard landings due to not enough fuel on board and is the reason for the exemption.

14 CFR 91.203 (a) & (b)

This section provides in pertinent part:

(a) Except as provided in § 91. 91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate....

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew. The small UAS fully loaded weighs no more than 55 lbs. and is operated without an onboard pilot. As such, there is no ability or place to carry certification and registration documents or to display them on the small UAS. An equivalent level of safety will be achieved by keeping these documents at the ground control point where the PIC will have immediate access to them, to the extent they are applicable to the small UAS.

14 CFR 91.405 (a); 407(a)(1); 409 (a) (2); 417 (a) & (b)

This section describes the maintenance and inspections required and specify the aircraft owner or operator "shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter...," and others shall inspect or maintain the aircraft in compliance with part 43. These sections do not apply to small UASs because they only apply to aircraft with an airworthiness certificate. Maintenance will be completed by the operator as they are the most familiar with the small UAS. A maintenance log will be kept showing any changes being made to the small UAS. An equivalent amount of safety will be achieved because of the limited size of the small UAS and its payload. It will only be operated in predefined areas for a limited period of time per described in the "LIMITATIONS ON OPERATIONS OF BIRDSEYE LLC" (pg 3).

HOW THE PUBLIC WOULD BENEFIT AS A WHOLE

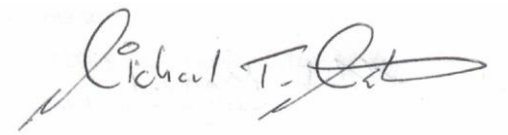
Approval of these 333 Exemptions allowing commercial operations of small UASs in the service of aerial photography will benefit the public by reducing the use of traditional aircraft used to acquire these photographs. The reduction of traditional aircraft will improve the safety of the public and reduce air and noise pollution as Birdseye LLC's small UASs are electric powered and comparatively silent in operation. In addition it will level the playing field by greatly reducing the costs of acquiring these photographs. Birdseye LLC wants to provide this service in order to educate the public on using water more efficiently thereby enhancing water conservation and helping the public good. The Southwestern United States where Birdseye LLC is located has been suffering from drought conditions for many years; we will use our training and experience in the irrigation industry, along with our training and experience in photography and piloting UASs, to reduce overall water use at Golf Courses and farms across the state of Arizona and someday the entire Southwestern United States. Using small UASs will enhance safety by reducing the overall risk associated with traditional aircraft. Traditional aerial photography requires large aircraft with flammable fuel to fly in close proximity of populated areas and people in general. With the use of small UASs of 55 lbs. or less, battery operated and fling

below 400 feet AGL the risk of injury of people on the ground or the crew has been greatly reduced. Abiding by previously stated safety measures as detailed in Appendix A will further mitigate this risk. The granting of the use of these small UASs by Birdseye LLC will help educate the public, golf course superintendents, and small farmers on proper water use by providing a perspective on their turf or crops that previously would have required dangerous piloted aircraft at a cost that was not practical for the common golf course or small farmer.

Granting Birdseye LLC the above exemption will allow for the expansion of UAS systems into the future for the safe conduct of free enterprise and will be in the public's interest, as we are trying to build a company who will serve the public good through education and finding new and creative ways to use technology to conserve water.

Birdseye LLC respectfully requests the FAA grant its exception without delay. We believe we've shown how it's in the public's best interest to grant this exemption and how an equivalent level of safety can reasonably be achieved. If you have any questions please contact us and we would be happy to answer them for you.

Sincerely,



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