



Federal Aviation Administration

August 5, 2015

Exemption No. 12352 Regulatory Docket No. FAA–2015–1061

Mr. Matthew Scott Ragan Birds Eye of Big Sky, LLC 33 Wild Goose Lane Kalispell, MT 59901

Dear Mr. Ragan:

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

By letter dated April 10, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Birds Eye of Big Sky, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial videography and photography, precision agriculture and environmental management and analysis, aerial inspection of land and structures, journalism and news gathering, and real estate marketing.

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 a DJI Phantom 2, DJI Inspire 1, and Cinestar-8 MK Heavy Lift.

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, Birds Eye of Big Sky, 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 and closed set motion picture and filming. 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, Birds Eye of Big Sky, 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 Inspire 1, and Cinestar-8 MK Heavy Lift 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: <a href="www.ntsb.gov">www.ntsb.gov</a>.

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

# BIRDS EYE OF BIG SKY 33 Wild Goose Lane Kalispell, MT 59901 (406) 885-3156



215 - 22 TU TO 22 RU

April 10, 2015

Docket Operations, M-30 U.S. Department of Transportation 1200 New Jersey Avenue, SE Room W12-140, West Building Ground Floor Washington, DC 20590-0001

Re: Petition for Exemption under FAA Modernization and Reform Act of 2012 (P.L. 112-95), Section 333

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012(FMRA) and 14 CFR Part 11, Birds Eye of Big Sky LLC (Birds Eye) hereby applies for an exemption from Federal Aviation Regulations (FARs) listed below under "Basis for Petition" and discussed in Appendix A. Exemption is being sought in order to allow Birds Eye to operate its unmanned aircraft systems (UAS) commercially for the purpose of aerial videography and photography, precision agriculture and environmental management and analysis, aerial inspection of land and structures, journalism and news gathering, real estate marketing, and closed-set motion picture and television film making and production.

## INTRODUCTION OF THE PETITIONER

Birds Eye provides services to its clients to enhance a variety of their business and personal objectives by providing digital photography, videography, cinematic consulting and other types of digital imaging and related services. The principal members of the organization possess over 20 years of experience in recreational/hobby aspects of R/C aviation, photography, videography and UAS piloting, photo and video editing, and training services. The objective of Birds Eye is to provide professional quality digital imaging, editing and analysis for a variety of commercial, public, private and not-for-profit organizations and individuals, including, but not limited to:

- Closed-set motion picture and television filming and production
- Photography and videography for journalism and news gathering purposes
- General aerial photography and inspection of land, structures and construction projects
- Real estate marketing photography and videography
- Digital imagery and data acquisition for precision agriculture, environmental management and scientific analysis

## **UNMANNED AERIAL SYSTEMS**

## DJI Phantom 2, DJI Inspire 1, Cinestar-8 MK Heavy Lift

Birds Eye seeks an exemption to operate DJI Phantom 2, DJI Inspire 1, and Cinestar-8 MK Heavy Lift unmanned aerial systems (UAS) for compensation or hire within the National Air Space (NAS). The DJI Phantom 2, DJI Inspire 1, and Cinestar-8 MK Heavy Lift are vertical takeoff and landing (VTOL) unmanned aircraft. The DJI Phantom 2 is a four-rotor quadcopter that has a maximum gross weight of approximately 3 pounds 3 ounces, including Zenmuse H3-2D gimbal and GoPro camera systems, and a maximum speed according to the manufacturer of approximately 33.5 miles per hour. The DJI Inspire 1 is a four-rotor quadcopter that has a maximum gross weight of 6 pounds 7.5 ounces, including onboard gimbal and camera systems and batteries, and a maximum speed of approximately 48.5 miles per hour. The Cinestar-8 MK Heavy Lift is an eight-rotor octocopter that has a maximum allowable weight according to the manufacturer of 21.75 pounds including batteries, Freefly Systems Movi M5 gimbal and a variety of high definition digital camera systems, and a maximum speed of approximately 35 miles per hour. Each of the above-described UAS are equipped with rotors and propellers driven by lithium polymer battery powered electric motors. Each are also equipped with the industry standards in GPS, electronics, guidance, propulsion, telemetry, safety features and ease of operator functionality. Detailed information regarding each UAS is attached to this petition as Appendices B through D.

It should be noted that these particular UAS have each been approved in connection with prior Section 333 grants of exemption. Specifically, the DJI Phantom 2 was the UAS identified by the petitioner in Exemption 11153; the DJI Inspire 1 in Exemption 11280: the Cinestar-8 MK HL in Exemption 11251. Each UAS is recognized in the UAS industry as a leading example of precision, quality, performance and durability and technological innovation. The UAS will offer Birds Eye a range of options for matching the desired flight characteristics and technology with the desired tasks, environmental conditions, and navigational demands, thus assuring overall safety and completion of assigned work product and desired results.

# **BASIS FOR PETITION**

Birds Eye, pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. Section 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, DJI Inspire 1, and Cinestar-8 MK Heavy Lift UASs in the national airspace system (NAS), and for an exemption from the requirements of 14 C.F.R. Sections 61.113(a) & (b), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).

The granting of exemption from the above-listed FARs will allow Birds Eye to conduct commercial operations of its UAS to efficiently and safely deliver high-definition digital imagery and other acquired data to its clients and customers more cost-effectively than traditional methods. Employing UAS technology can also be safer for workers because in many instances

the workers may avoid dangerous or precarious hazards or physical positions involving high risk of injury. Unmanned aerial systems also enable safe inspection of difficult to reach or environmentally sensitive locations without the use of heavy trucks, cranes, booms or other equipment requiring greater expense or attendant undesirable environmental impacts. In general, UAS operated by Birds Eye will economically benefit their customers by acquiring important and aesthetic digital imagery and data safely and less expensively for a wide variety of applications.

Birds Eye proposes to use UAS that are multi-rotor craft weighing a maximum of 21.75 pounds fully loaded, or less, which fly at a speed of 48.5 miles per hour, or less. The craft are all equipped with built-in safety features including sophisticated navigation controls and fail-safe technology to assure safe and predictable aerial maneuvers, take-off and landing. Proposed

operations will be conducted under controlled conditions in airspace that is limited, predetermined, access controlled and under constant monitoring before and during flight. Operations contemplated under the exemption will be subject to strict operating parameters to ensure at least an equivalent level of safety to currently authorized and/or exempted operations.

## NAME AND ADDRESS OF THE PETITIONER

The name and address of the Petitioner and point of contact is:

Birds Eye of Big Sky LLC Attn: Matthew Scott Ragan 33 Wild Goose Lane Kalispell, MT 59901 (406) 885-3156

Email: Mattr@birdseyeofbigsky.com

### **OPERATING DOCUMENTS**

The comprehensive operations manuals/user guides/safety guides and other detailed information provided by the UAS manufacturers are attached to this petition as Appendix "B" (DJI Inspire 1), Appendix "C" (DJI Phantom 2), and Appendix "D" (Cinestar-8 MK Heavy Lift). The appendices are comprehensive and current for each UAS, and offer a complete description of each aircraft, including operating features and protocols, specifications, maintenance recommendations and guidance, safety and navigation information, battery maintenance and safety, aircraft controls and gimbals, and more.

Attached as Appendix "E" is Birds Eye Pre-flight Checklist and In-flight safety checklist; Appendix "F" contains Birds Eye UAS Flight Log Forms and Birds Eye Monthly Maintenance Log Form. It is also the intention of Birds Eye to complete, submit and receive FAA approval for a Motion Picture and Television Operations Manual and approved Flight Operations Manual for use in closed-set motion picture and television filming and production, which shall be added to this Petition as Appendix "G" when it has been approved and received by Birds Eye.

# THE PILOT IN COMMAND (PIC)

The PIC will:

- Hold a current FAA private pilot certificate or higher FAA pilot certification
- Hold a valid third-class medical certificate
- Have accumulated and logged, in a manner consistent with 14 CFR 61.51(b), a minimum of 25 hours of total time as a UAS rotorcraft pilot and at least 10 hours logged as a UAS pilot with similar UAS type
- Have accumulated and logged a minimum of five hours as a UAS pilot with the make and model of UAS to be utilized for operations under the exemption and three take-offs and landings in the preceding 90 days prior to an operation
- As noted below in "Operating Parameters, Limitations, Conditions and Requirements", the operator will not allow a PIC to operate unless the PIC has demonstrated that the PIC is able to safely operate the UAS in a manner consistent with how the UAS will be operated under the exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

Visual observers must have demonstrated that they understand the conditions and limitations of flight noted in the same section which follows immediately below.

# **OPERATING PARAMETERS, LIMITATIONS, CONDITIONS AND REQUIREMENTS**

Grant of the exemptions will be subject to the following conditions, which provide at least an equivalent or higher level of safety than under the current conditions. These conditions are derived from Exemptions 11062 through 11067, 11080, 11109 and 11110, and others.

For the following listing, the Petitioner Birds Eye is referred to as the operator.

- 1. Operations authorized by the grant will be limited to the UAS described above and manufacturers' upgraded versions.
- 2. The UAS weigh 21.75 pounds or less, including batteries, gimbals, camera systems and other necessary attachments.
- 3. The UA will be flown at a maximum ground speed of 50 miles per hour. In no case will a UA be operated at airspeeds greater than the maximum UA airspeed recommended by the aircraft manufacturer.
- 4. The UA will be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude will be reported in feet AGL.

- 5. The UA will 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 medical certificate or U.S. driver's license.
- 6. All operations will utilize a visual observer (VO). The UA will 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 will be able to communicate verbally at all times. Electronic messaging or texting will not be permitted during flight operations. The PIC will be designated before the flight and will not transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions duties required of the VO.
- 7. The operating documents and the grant of exemption will be accessible during UAS operations and made available to the Administrator upon request. The operator may update or revise its operating documents. It will be the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. If there is a discrepancy between the exemption conditions and limitations and the procedures outlined in the operating documents, the conditions and limitations in the grant of exemption take precedence and will be followed. Otherwise, the operator will follow the procedures outlined in its operating documents. If the operator determines that any update or revision would affect the basis upon which the FAA may grant this exemption, the operator will petition the FAA for amendment to the exemption.
- 8. Any UAS that has undergone maintenance or alterations that affect the UAS flight characteristics or operation, e.g. replacement of an essential flight component, will undergo a functional test flight prior to conducting further operations. Functional test flights will be conducted by a PIC with a VO and will remain at least 500 feet from other people. The functional test flight will be conducted in such a manner so as not to pose an undue hazard to persons and property.
- 9. The operator will be 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 will conduct a pre-flight inspection and determiner that the UAS is in a condition for safe flight. The pre-flight inspection will 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 will be 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 will follow the UAS manufacturers' maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

- 12. Each UAS operated under the exemption will comply with all manufacturer safety bulletins.
- 13. The PIC will possess at least a private pilot certificate and a current third-class FAA airman medical certificate. The PIC will also meet the flight review requirements specified in 14 CFR 61.56.
- 14. The operator may not permit any PIC to operate unless the PIC has demonstrated that the PIC is able to safely operate the UAS in a manner consistent with how the UAS will be operated under the exemption, including evasive and emergency maneuvers and maintaining appropriate distance from people, vessels, vehicles and structures. PIC qualification flight hours and currency will be logged in a manner consistent with 14 CFR Section 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PICs ability to safely operate the UAS in a manner consistent with how the UAS will be operated under the exemption will be permitted under the terms of this exemption. However, training operations will only be conducted during dedicated training sessions. During training, proficiency and experience-building flights, all persons not essential for flight operations are to be considered non-participants, and the PIC will operate the UA with appropriate distance from non-participants in accordance with 14CFR Section 91.119
- 15. UAS operations will not be conducted during night, as defined in 14 CFR Section 1.1. All operations will be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) will not be conducted.
- 16. The UA will 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 aeronautical chart published by the FAA, 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 will be made available to the Administrator or any law enforcement official upon request.
- 17. The UA will 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 will return to a predetermined location or recovery point within the private or controlled-access property.
- 19. The PIC will abort the flight in the event of unpredicted obstacles or emergencies.
- 20. The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and still maintain a reserve battery power of no less than 25%.

- 21. The operator will apply for and obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under the grant of exemption.
- 22. All aircraft operated in accordance with the exemption will be identified by serial number or equivalent, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings will be as large as practicable.
- 23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR Sections 91.9 and 91.203 will be available to the PIC at the Ground Control Station of the UAS at any time the aircraft is operating. These documents will be made available to the Administrator or any law enforcement official upon request.
- 24. The UA will remain clear and give way to all manned aviation operations and activities at all times.
- 25. The UAS will not be operated by the PIC from any moving device or vehicle.
- 26. All flight operations will be conducted at least 500 feet from all non-participating persons, vessels, vehicles, and structures unless:
  - a. Barriers or structures are present that sufficiently protect non-participating persons from the UA and/or debris in the event of an accident. The operator will ensure that non-participating persons remain under such protection. If a situation arises where non-participating persons leave such protection and are within 500 feet of the UA, flight operations will cease immediately in a manner ensuring the safety of non-participating 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 will not be considered non-participating persons under the exemption.
- 27. All operations shall be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Such permission will be obtained for each flight.
- 28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA will be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents will be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

- 29. The operator will engage in closed-set motion picture and television filming and production in accordance with the conditions and limitations enumerated and described in the Birds Eye flight operations and procedures manual (FOPM), and approved motion picture and television operations manual (MPTOM) to be attached to this petition as Appendix "G".
- 30. At least 3 days before aerial filming, the operator of the UAS which is subject to this exemption will 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 the 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 number 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 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 MPOTM.

# THE PUBLIC INTEREST

The public interest in granting this exemption request is served by, among others, the following:

- The use of UAS improves public safety and reduces risk by alleviating the public's exposure to danger and emissions associated with conventional aerial methods (full size aircraft) that are very heavy, fast and carry passengers, flammable fuel and cargo.
- A myriad of ecological and environmental benefits and improved economic efficiency and scientific information and data acquisition are potential public benefits accomplished through the use of UAS for precision inspections of infrastructure and industrial plant and equipment such as energy pipelines, power lines, smokestacks, towers, and other man-made structures, which can be observed and later analyzed safely, accurately and unobtrusively.

- Commerce can be improved through data and image acquisition for real estate, construction, precision agriculture, surveying and other applications of UAS technology.
- The visual arts such as film, photography and television are improved through exciting and beautiful images captured via the versatile aerial platform UAS provides, which benefits the collective cultural and aesthetic demands and desires of an appreciative public.
- UAS may be an exceptional tool for journalists and all manner of news gathering and reporting media, to serve the public good in enhancing accurate dissemination of newsworthy and relevant information to interested citizens.
- Approval of this exemption will provide immediate employment opportunities for individuals and businesses whose livelihood may be directly or indirectly improved through career opportunities and job creation in a growing technology sector of the economy.
- Congress has established a national policy that favors prompt integration of UAS into the NAS, provided that judicious and reasoned agencies and officials guide the process prudently and with due emphasis on public safety and efficiency. The granting of this Petition for exemption will serve this public policy mandate and result in the attendant benefits perceived by this policy.

### **SUMMARY FOR PUBLICATION**

For publication in the Federal Register, Birds Eye provides this summary:

An exemption is requested from the following regulations in order to allow commercial operation of its Unmanned Aircraft Systems involving aerial applications such as closed-set motion picture and television filming, general aerial photography and videography for inspection of land, structures, construction projects and real estate, videography and photography for journalism and news gathering purposes, digital imagery and data acquisition for precision agriculture, environmental management, and scientific analysis.

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14 CFR Section 61.113 (a) and (b)
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14 CFR Section 91.7(a)

14 CFR Section 91.119(c)

14 CFR Section 91.121

14 CFR Section 91.151(a)(1)

14 CFR Section 91.405(a)

14 CFR Section 91.407(a)(1)

14 CFR Section 91.409(a)(1) and (a)(2)

14 CFR Section 91.417(a) and (b)

#### CONCLUSION

Birds Eye seeks an exemption, pursuant to 14 CFR Section 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit Birds Eye to safely operate UAS commercially for the purposes and operations described herein. In granting this Petition,

the FAA Administrator will be fulfilling the Congressional mandate and policy of FMRA, while also providing a significant number of benefits to the public, the environment and the economy. The exemption will enable Birds Eye to utilize its technological expertise, advanced aircraft, and entrepreneurial vision to enhance the safety, beauty and economic progress of the public and private sectors and advancing the interests of society at large.

Birds Eye respectfully requests that the Administrator grant this Petition for an exemption from the requirements discussed herein, and permit Birds Eye to operate commercially the unmanned aircraft systems in the aerial operations set forth herein.

Thank you for your consideration.

Sincerely, Ma 4hor Scott Roger

Matthew Scott Ragan

Birds Eye of Big Sky LLC