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

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

September 9, 2015

Exemption No. 12797
Regulatory Docket No. FAA−2015−2644

Ms. Christa Hinckley
Dentons US LLP
2000 McKinney Avenue
Suite 1900
Dallas, TX 75201

Dear Ms. Hinckley:

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 June 4, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Winn Fuqua Photography, Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, and data collection.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

**Airworthiness Certification**

The UAS proposed by the petitioner are the DJI Phantom 2 and DJI Inspire 1.

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, Winn Fuqua Photography, Inc. 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, Winn Fuqua Photography, Inc. 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 and DJI Inspire 1 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 September 30, 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
WASHINGTON, DC

**IN THE MATTER OF THE PETITION FOR EXEMPTION OF:**

**Winn Fuqua Photography, Inc.**

**FOR A SUMMARY GRANT EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF TITLE 14 OF THE CODE OF FEDERAL REGULATIONS PART 21, SUBPART H AND SECTIONS 61.23(a) & (c), 61.101(e)(4) & (5), 61.113(a), 61.315(a), 91.7(a), 91.9(b)(2), 91.103, 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) CONCERNING COMMERCIAL OPERATION OF DJI PHANTOM 2 AND DJI INSPIRE 1 UNMANNED AIRCRAFT SYSTEMS PURSUANT TO SECTION 333 OF THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)**

Submitted on June 4, 2015

Winn Fuqua Photography, Inc.
10608 Ravenscroft Drive
Dallas, TX 75230
469-867-3782

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## GLOSSARY OF ABBREVIATIONS and TERMS

| | |
|---|---|
| AGL | Above Ground Level |
| AOI | Area of Interest |
| ATC | Air Traffic Control |
| ATO | Air Traffic Organization |
| AV | Aerial Vehicle |
| CFR | Code of Federal Regulations |
| COA | Certificate of Authorization |
| FAA | Federal Aviation Administration |
| FARs | Federal Aviation Regulations |
| FMRA | FAA Modernization and Reform Act of 2012 |
| Fuqua's sUASs | One DJI Phantom 2 and one DJI Inspire 1 |
| GCS | Ground Control Station |
| GPS | Global Positioning System |
| LOL | Loss of Link |
| NAS | National Airspace System |
| NOTAM | Notice to Airman |
| OPERATING DOCUMENTS | For each of Fuqua's sUASs, Fuqua's Monthly Maintenance Log, the User Manual, and Technical Specifications, and when (and if) granted the operating specifications and restrictions set forth in the exemption for the applicable sUAS. |
| Operator | Winn Fuqua Photography, Inc. |
| PIC | Pilot In Command |
| Section 333 | FAA Modernization and Reform Act of 2012 (FMRA) Section 333 |
| SOP | Standard Operating Procedures |
| sUAS | A small Unmanned Aircraft System |
| UA | Unmanned Aircraft |
| UAS | Unmanned Aircraft System |
| VFR | Visual Flight Rules |
| VLOS | Visual Line of Site |
| VMC | Visual Meteorological Conditions |
| VO | Visual Observer |
| VTOL | Vertical Takeoff and Landing |

## I. SUMMARY

Pursuant to Section 333 of FMRA, Winn Fuqua Photography, Inc. (“Fuqua” or "Operator"), hereby applies for an exemption from the following listed FARs to operate its sUASs for commercial purposes:

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

14 C.F.R § 45.23

14 C.F.R. § 45.27(a)

14 C.F.R. § 61.23(a) & (c)

14 C.F.R. § 61.101(e)(4) & (5)

14 C.F.R. § 61.113(a)

14 C.F.R. § 61.315(a)

14. C.F.R. § 91.7(a)

14 C.F.R. §91.9(b)(2)

14 C.F.R. §91.103

14 C.F.R. §91.119(c)

14. C.F.R. §91.121

14. C.F.R. §91.151(a)(1)

14. C.F.R. §91.405(a)

14. C.F.R. §91.407(a)(1)

14. C.F.R. §91.409(a)(1) & (a)(2)

14. C.F.R. §91.417(a) & (b)

This exemption will allow Fuqua to employ its sUASs to conduct commercial aerial photography and videography in pre-planned, controlled areas. These operations will be conducted within and under the conditions outlined herein, or as may be established by the FAA as required by Section 333 of FMRA.

As described in greater detail below, the requested exemption would permit the operation of a sUAS at or below 400 feet AGL, under controlled conditions in airspace that (1) is limited; (2) is predetermined; (3) is controlled as to access; and (4) provides safe operations. No operations will be conducted over restricted airspace or over congested areas. Approval of this exemption would enhance safety, promote industry growth and fair competition through increased affordability of aerial photography and videography, and would fulfill the Secretary of Transportation’s responsibilities to establish requirements for the safe operation of such aircraft systems in the NAS pursuant to Section 333 of FMRA.

## II. INTRODUCTION AND INTERESTS OF THE PETITIONER

Fuqua is a professional, advertising photography and videography company working with a wide range of industries ranging from advertising, public relations, residential/commercial realty, construction,

industrial applications and the agricultural community. Fuqua has been in business for over 25 years and the owner of Winn Fuqua Photography, Inc., Winn Fuqua, has over 5 years of recreational/hobby experience in remote controlled vehicles.

Fuqua's objective is to collect aerial data by conducting aerial photography and videography in order to provide high quality digital imaging and video content to its clients, and to promote the safe use of sUAS's by being an educator on the subject. More specifically, the purpose of this exemption would be to allow Fuqua to provide commercial aerial video and photography operations in the following areas:

- Aerial photography and videography for the advertising industry
- Aerial photography and videography of residential/commercial buildings for the real estate industry
- Aerial photography and videography for industrial/construction sites
- Aerial photography and videography for the agricultural and farming industry
- Increase public knowledge of sUAS and promote safe sUAS operations

## III. BACKGROUND ON FUQUA'S sUASs

Fuqua seeks an emption to operate its two sUASs for compensation or hire within the NAS for aerial photography and videography. Fuqua will operate its sUASs in line of sight and within a closed-off, predetermined area with written and/or oral permission from the relevant property owners and in accordance with applicable local law. Fuqua's sUASs have the following operational characteristics:

- The DJI Phantom 2 operates at a maximum flight speed of 15m/s;
- The DJI Inspire 1 operates a maximum flight speed of 22 m/s;
- Each of Fuqua's sUASs is a vertical takeoff and landing sUAS with a ground control station utilizing electronic tablet or smart phone systems;
- Each of Fuqua's sUASs has the capability to hover, and move in the vertical and horizontal plane simultaneously;
- Fuqua's Phantom 2, has a maximum gross weight of 1000g (approximately 2 pounds) with a length of 16 inches, width of 16 inches and height of 8 inches, and is equipped with four main rotors, driven by Lithium Polymer battery powered electric motors;
- Fuqua's Inspire 1 has a maximum gross weight of 2930g (approximately 6.7 pounds) with a length of 22 inches, width of 17 3/4 inches and height of 11 inches, and is equipped with four main rotors, driven by Lithium Polymer battery powered electric motors;

Petitioner's proposed use will have flight times of a maximum of 20 minutes, allowing Fuqua to properly staff small flight areas, and to have ample time to control each sUAS to a safe landing zone. Fuqua's sUASs are the type of lightweight sUAS expressly contemplated by FMRA. Each of Fuqua's sUASs, including payload, is far below the 55 pound sUAS classification requirement, and one is also below the 4.4 pound requirement developed by the proposed 14 C.F.R. Part 107 that creates the "micro-UAS" subclass of sUAS.

Fuqua's sUASs will be operated by trained professionals and registered in accordance with 49 U.S.C. § 44103, Registration of Aircraft, as well as 14 C.F.R. Part 47, Aircraft Registration, and marked in accordance with 14 C.F.R. Part 45, Identification and Registration Marking, subject to the exemption requested below.

No operations will be conducted in restricted airspace or over congested areas, and, if required, and all other operations will be conducted only with FAA ATC permission or as otherwise stipulated by the FAA. In addition, the maximum altitude for any operation will not exceed 400 feet above ground level. Operations will only be conducted in daylight and within visual line of sight. Additionally, Fuqua's sUASs will not be operated within five (5) nautical miles of any airport, and notice will be given to the local Flight Service District Office (FDSO) prior to flight operations.

## IV. BASIS FOR PETITION

### A. SUMMARY

Petitioner, Fuqua, pursuant to the provisions of the FARs (14 C.F.R §11.61) and FMRA, Section 333, Special Rules for Certain Unmanned Aircraft Systems, hereby petitions the Administrator to operate commercially the sUASs described above in the NAS, and for an exemption from the requirements of the following: 14 C.F.R. Part 21, Subpart H, and 14 C.F.R. Sections §§ 45.23, 45.27(a), 61.23(a) & (c), 61.101(e)(4) & (5), 61.113(a), 61.315(a), 91.7(a), 91.9(b)(2), 91.103, 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).

This exemption application is expressly submitted to fulfill the legislative goals set forth in Section 333 of FMRA. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the NAS 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 types of sUASs do not create a hazard to users of the NAS or the public, or pose a threat to national security. Fuqua's operation of its sUASs will meet the conditions of FMRA's Section 333 given (1) the size, weight, speed and operational capability of Fuqua's sUASs; (2) the operation of Fuqua's sUASs away from airports and in a limited operating area; and (3) the operation of Fuqua's sUASs within visual line of sight of the Operator.

Accordingly, Fuqua seeks relief *inter alia* from the following:

(1) Section 91.7(a), entitled Civil Aircraft Airworthiness. Given that Fuqua's sUASs meets the requirements of Section 333, Fuqua will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H, and hence Fuqua requests relief from Section 91.7(a). Fuqua will ensure that each of Fuqua's sUASs is in an airworthy condition, prior to every flight, by determining that it's in compliance with the applicable Operating Documents, and that each sUASs is in a condition for safe flights;

(2) Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2) and 91.417(a) & (b), entitled Maintenance Required, Operation after Maintenance, Preventative Maintenance, Rebuilding or Alteration, Inspection and Maintenance Records, respectively. Relief is requested from these sections as they set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate. Fuqua submits that the requested relief is proper since an equivalent level of safety will be ensured. Fuqua will use experienced personnel or technicians to perform maintenance, alterations, or preventive maintenance on its sUASs using methods, techniques and practices prescribed in the Operating Documents. Furthermore, Fuqua will document and maintain all maintenance records for its sUASs;

(3) Sections 61.23(a) & (c), entitled Medical Certificates: Requirement and Duration. Relief is requested from this section as the FAA has announced in a Press Release dated April 9, 2015 that medical certification will no longer be required to operate sUAS.

(4) Certain requirements of Sections 61.101(e)(4) & (5), 61.113, and 61.315, entitled Recreational Pilot Privileges and Limitations, Private Pilot Privileges and Limitations: Pilot in Command, What are the Privileges and Limitations of my Sports Pilot Certificate? Relief is requested from these Sections to the extent necessary to allow a PIC to operate Fuqua's sUASs, provided such PIC (a) holds a Recreational or Sports Pilot (or higher level) certificate, (b) holds a valid U. S. drivers license, and (c) has demonstrated that he/she is able to operate safely Fuqua's sUASs in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distance from people, vessel, vehicles and structures. In addition, relief is requested as it is the Operator's intent to operate its sUASs for compensation or hire and in furtherance of a business.

(5) Section 91.121, entitled Altimeter Settings. Relief is requested as Fuqua's sUASs will not have a typical barometric altimeter onboard. However, altitude information of Fuqua's sUASs will be provided to the PIC via Global Positioning System (GPS) equipment and radio communications telemetry data link, which downlinks from each sUAS to the GCS for active monitoring of the flight path. This altitude information, combined with Fuqua's operation of its sUASs within visual line of sight and at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121.

(6) Section 91.151(b), entitled Fuel Requirements for Flight in VFR Conditions. Relief is requested as Fuqua submits that safety will not be affected by the operation of its sUASs during daylight hours in visual meteorological conditions (VCM) under visual flights rules (VFR), with enough battery power to fly for a total duration of approximately 15 minutes to the first point of intended landing, and, assuming normal cruising speed, to fly after that for at least 5 minutes.

## B. SUPPORT FOR THE PETITION FOR EXEMPTION

In accordance with 14 C.F.R. § 11.81 (a)-(f), Fuqua provides the following information in support of its petition for exemption:

(a) Name and address of the Petitioner.

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

The name and address of the applicant is:

Winn Fuqua Photography, Inc.
10608 Ravenscroft Drive
Dallas, Texas 75230
469-867-3782
winn@winnfuqua.net

The point of contact for this Petition and specific contact information is:

Christa Hinckley
Dentons US LLP
2000 McKinney Ave., Suite 1900
Dallas, Texas 75201
214-259-0922
christa.hinckley@dentons.com

(b) Specific Sections of 14 C.F.R from which Fuqua seeks exemption:

(1) 14 C.F.R. Part 21 Subpart H and 14 C.F.R § 91.203(a)(1) and (b):

Subpart H of 14 C.F.R. Part 21, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by 14 C.F.R. § 91.203(a)(1) and (b).

(2) 14 C.F.R. §§ 45.23 and 45.27(a), entitled Display of Marks, general and Location of marks; non-fixed-wing aircraft, respectively, establishes the regulatory requirements for the identification of aircraft including US registration requirements and size.

(3) 14 C.F.R. § 61.23(a) & (c):

14 C.F.R. § 61.23(a) & (c), entitled Medical Certificates: Requirement and Duration establishes the medical certification required for various categories of pilot certification and/or aircraft operation.

(4) 14 C.F.R. § 61.101(e)(4) & (5):

Pursuant to 14 C.F.R. §61.101(e)(3),(4)&(5), entitled Recreational Pilot Privileges and Limitations, no person holding a recreational pilot certification can act as PIC of an aircraft that is operated for compensation or hire or in furtherance of a business.

(5) 14 C.F.R. § 61.113(a):

Pursuant to 14 C.F.R. § 61.113(a), entitled Private Pilot Privileges & Limitations, no person who holds a private pilot certificate may act as a pilot in command of an aircraft that is carrying passengers or property for compensation or hire, nor may that person, for compensation or hire, act as pilot in command of an aircraft.

(6) 14 C.F.R. § 61.315(a):

Pursuant to 14 C.F.R. § 61.315, entitled What are the Privileges and Limits of my Sport Pilot Certificate?, no person holding a Sport Pilot Certificate can act as a PIC of a light sport aircraft that is operated for compensation or hire or in furtherance of a business.

(7) 14 C.F.R. § 91.7(a):

Pursuant to 14 C.F.R. § 91.7 (a), entitled Civil Aircraft Airworthiness, no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for Fuqua's sUASs, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness.

(8) 14 C.F.R. § 91.9(b)(2):

Section 91.9 (b) (2), entitled Civil Aircraft Flight Manual in the Aircraft, provides: "No person may operate a U.S.-registered civil aircraft ... (2) 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."

(9) 14 C.F.R. § 91.103:

Section 91.103, entitled Preflight Action requires each PIC to take certain actions before flight to insure the safety of flight.

(10) 14 C.F.R. §91.119:

Section 91.119, entitled Minimum Safe Altitudes, establishes safe altitudes for operation of civil aircraft.

(11) 14 C.F.R. §91.121:

Section 91.121, entitled Altimeter Settings, requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "...to the elevation of the departure airport or an appropriate altimeter setting available before departure."

(12) 14 C.F.R. § 91.151(a):

Section 91.151(a), entitled Fuel Requirements for Flight in VFR Conditions, prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) unless there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed - (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes."

(13) 14 C.F.R. §91.405(a); 407(a)(1); 409(a)(1) & (2); 417(a) & (b):

These regulations, respectively entitled Maintenance Required, Operation after Maintenance, Preventive Maintenance, Rebuilding or Alternation, Inspections, and Maintenance Records, require, *inter alia*, that an aircraft operator or owner "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.

(c) The Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks the Relief

(1) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from 14 C.F.R. Part 21, Subpart H and 14 C.F.R § 91.203(a)(1) and (b): Airworthiness Certificates.

Fuqua requests exemption from the requirements for an airworthiness certificate, pursuant to 49 U.S.C. § 44701(f) and Section 333 of FMRA. Given the size and limited operating area associated with the aircraft to be utilized by Fuqua, an exemption from Part 21, Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the FMRA. The FAA is authorized to exempt aircraft from the requirement for an airworthiness certificate upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas. In all cases, an analysis of these criteria demonstrates that Fuqua's sUASs can be operated without an airworthiness certificate, in a restricted environment, and under the conditions proposed which will be at least as safe, or safer, than a conventional aircraft operating with an airworthiness certificate without the restrictions and conditions proposed.

(2) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks relief from 14 C.F.R. Sections 45.23 and 45.27(a): Display of Marks, general and Location of marks; non-fixed-wing aircraft,

Given the size of Fuqua's sUASs two inch lettering will be impossible. Fuqua's sUASs will be identified by serial number, registered in accordance with 14 C.F.R. Part 47, and will have identification numbers ("N" numbers) markings in accordance with 14 C.F.R. Part 45, subpart C, subject to 14 C.F.R. 45.29(f), which allows markings to be as large as is practicable.

(3), (4) (5) & (6) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from Sections 61.23(a) & (c), 61.101(e)(4) & (5), 61.315(a) and 61.113(a): Medical Certificates: Requirement and Duration; Recreational Pilot Privileges and Limitations; Private Pilot Privileges and

Limitations: Pilot in Command; What are the Privileges and Limitations of my Sports Pilot Certificate?

Relief from the Sections listed above is requested to the extent necessary to allow, in accordance with the FAA Press Release issued on April 9, 2015, the PIC of a sUAS to hold a Recreational or Sports Pilot Certification, and a valid U.S. drivers license only, not a medical certificate. Further, relief is requested to operate such sUAS for compensation or hire and in the furtherance of a business.

Fuqua's sUASs do not carry any pilots, passengers, or property. Therefore, an exemption is appropriate. Although helpful, a private pilot's license will not ensure remote control piloting skills. The training and knowledge required for pilots of conventional aircraft would not necessarily make such pilots safe to operate a sUAS. Moreover, the risks attendant to the operation of a sUAS are far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61.

As set forth more fully below, Fuqua submits that an equivalent level of safety will be maintained because no PIC will be allowed to operate any of Fuqua's sUASs unless that PIC has demonstrated that he/she is able to safely operate the sUASs in a manner consistent with the operations specifications as described in this Petition, including evasive and emergency maneuvers, as well as maintaining appropriate distances from people, vessels, vehicles and structures. Further, Fuqua submits that all flights of its sUASs, conducted by the PIC pursuant to the grant of this Petition: (a) will be incidental to Fuqua's business; and (b) will not carry passengers or property for compensation or hire.

Fuqua believes that though sUAS are not traditional aircraft, a PIC operating the UA must have knowledge of airman and airspace rules and must comply with all the rules proposed by the FAA. In addition, Fuqua's PICs will operate its sUASs no higher than 400 AGL, consequently causing no danger to any other aircraft in the NAS.

(7) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from Section 91.7(a): Civil Aircraft Airworthiness

Relief from Section 91.7(a) is requested to the extent to allow Fuqua to determine that its sUASs are in airworthy condition prior to every flight by ensuring that its sUASs are in compliance with the Operating Documents. Fuqua seeks the requested relief because its sUASs do not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Fuqua will ensure that Fuqua's sUASs are in an airworthy condition, prior to every flight, by determining that each such sUAS is in compliance with its applicable Operating Documents, and that each such sUAS is in a condition for safe flights;

Therefore, Fuqua will ensure that each of its sUASs is in an airworthy condition based upon its compliance with the Operating Documents prior to every flight, and further, Fuqua will determine that each of its sUASs is in condition for safe flight, as stated in the conditions and limitations below.

(8) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from 14 C.F.R. § 91.9(b)(2): Civil Aircraft Flight Manual in the Aircraft

Each of Fuqua's sUASs, given its respective size and configuration, has no ability or place to carry such a flight manual or placards on the aircraft, not only because there is no pilot on board, but also because there is no room or capacity to carry such an item on the aircraft. The equivalent level of safety will be maintained by keeping the flight manual at the ground control point where the PIC flying the applicable sUAS will have immediate access to it.

(9) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from 14 C.F.R. § 91.103: Preflight Action

As FAA-approved aircraft or rotorcraft flight manuals will not be provided for Fuqua's sUASs, an exemption will be needed. The PIC will take all actions, including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data, before the initiation of any flight.

(10) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from 14 C.F.R. §91.119(c): Minimum Safe Altitudes.

Fuqua seeks an exemption from this section as flight operations will always be at or below four-hundred (400) feet AGL. An equivalent level of safety will be achieved by: (a) pre-flight planning, (b) communication with the local ATC and the local FSDO, (c) securing the flight area to prevent the public from entering, (d) briefing all crew on emergency procedures, (e) operating only with visual line of sight and during the daylight, and (f) ensuring operation of aircraft safety systems. Protections equivalent to minimum safe altitudes are created because, in the event of low-battery power, loss of communication or interference with communication between the remote control and the aircraft, on-board safety programs will automatically land the sUAS at a predetermined safe area. Similarly, the operational environment will be controlled to keep out the public.

In addition, each of Fuqua's sUASs will have a total rotor area of less than two (2) feet, and will weigh equal to or less than 6.7 pounds. As such, the risk to persons and property is drastically reduced. Further, Fuqua's sUASs will not carry fuel, flammable material, or hazardous cargo that would pose a hazard to persons on the ground.

(11) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from Section 91.121: Altimeter Settings

Relief from Section 91.121 is required to allow flight operations of Fuqua's sUASs which utilize a barometric pressure sensor, GPS equipment and a radio communications telemetry data link to downlink altitude information from the sUAS to the PIC at the GCS. This system will automatically ensures that a ground level pressure setting will be established prior to each flight, and provides the PIC with altitude information of the sUAS on the heads-up display of the GCS. Since the FAA requires that any altitude information concerning sUAS operations be reported to air traffic control (ATC) in feet above ground level (AGL), Fuqua seeks the requested relief because its sUASs altimeter may be set on the ground to zero feet AGL, rather than the local barometric pressure or field altitude, before each flight. Considering the limited altitude of the proposed operations, relief from 14 C.F.R. 91.121 is sought to the extent necessary to comply with the applicable conditions and limitations stated below. In this manner an equivalent level of safety will be maintained.

An exemption is also sought as Fuqua's sUASs is manufactured without an altimeter or two-way communications radio, and there is no one aboard to read the altimeter. An equivalent level of safety is achieved through on-board systems and GPS sensors coupled with a geomagnetic compass to act as a barometric altimeter for stability and accuracy of flight. Information about the height of Fuqua's sUASs above ground level is displayed to the PIC at all times.

(12) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from Section 91.151(a)(1): Fuel Requirements for Flight in VFR Conditions

Relief from Section 91.151(a)(1) is requested to the extent required to allow flights of the battery powered sUAS during daylight hours in visual meteorological conditions (VMC), under visual flight rules (VFR), for a total duration of 15 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 5 minutes. Fuqua seeks the requested relief

because without an exemption from Section 91.151(a)(1), the flight time duration of the battery powered sUASs will severely constrain the practicality of any aerial video or photographic flight operations that Fuqua proposes to conduct pursuant to this Petition.

Significantly, as set forth below, the technical specifications of Fuqua's sUASs, the Operating Documents, and Fuqua's proposed operating limitations, ensure that Fuqua will safely operate its sUASs.

(13) Extent of Relief Fuqua Seeks and the Reason Fuqua Seeks Relief from Section 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.471(a) & (b): Maintenance Required, Operation after Maintenance, Preventive Maintenance, Rebuilding or Alternation, Inspections, and Maintenance Records

Since Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.471(a) & (b) only apply to aircraft with an airworthiness certificate, Fuqua requests relief from these Sections because its sUASs will not require an airworthiness certificate. As set forth more fully below, Fuqua's sUASs meet the conditions of FMRA Section 333 for operation without an airworthiness certificate. In addition, Fuqua will use trained technicians to perform maintenance, alterations, or preventative maintenance on its sUASs using the methods, techniques and practices prescribed in its sUASs Operating Documents. Furthermore, Fuqua will document and maintain all maintenance records for its sUASs. Given that these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to Fuqua's sUASs. Maintenance will be accomplished by Fuqua pursuant to the Operating Documents.

Additionally, an equivalent level of safety will be achieved because these sUASs are very limited in size, will carry a small payload and will operate only in restricted areas for limited periods of time. If mechanical issues arise the sUASs can land immediately, and will be operating from no higher than 400 feet AGL. Fuqua will also ensure that its sUASs (a) are in working order prior to initiating flight, (b) are maintained as required by the Operating Documents, and (c) each shall have a log of any maintenance performed.

(d) Granting Fuqua's Exemption Requests would be in the Public Interest

(1) Increased Competition:

Granting this Petition furthers the public interest by safely allowing Fuqua to efficiently and economically perform aerial photography and videography for its clients. This exemption benefits the public by expanding the use of aerial photography and videography by making such services available to a greater number of businesses, public entities and private persons. Aerial photography and videography through sUAS is safer, more affordable, less time-restrictive than through more conventional methods. For small-budget clients, the significant expense associated with aerial photography or videography makes such ventures unrealistic financially. Only large companies can generally afford to absorb such expenses. The use of sUAS to achieve aerial photographic objectives is much more fiscally reasonable, and creates opportunities for a wide range of clients to use Fuqua (and other companies) for their aerial photography or videography needs. This can only have a beneficial economic impact.

(2) The Public Will Benefit from Decreased Congestion of the NAS.

Fuqua's sUASs are battery powered, and serve as a safe, efficient, and economical alternative to the manned aircraft traditionally utilized to obtain aerial photography or videography. By reducing the amount of manned aircraft needed to perform aerial photography or videography, an exemption allowing the use of Fuqua's sUASs would reduce the amount of manned aircraft in the NAS, reduce noise and air pollution, as well as increase the safety of life and property in the air and on the ground.

Furthermore, by reducing the number of manned aircraft operating in the NAS, congestion around airports caused by arriving and departing aircraft will be reduced. Fuqua's sUASs do not require an airport to takeoff or land. Likewise, a reduction of manned aircraft conducting aerial video and photography missions 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.

(3) The Public Will Benefit from the Safety and Efficiency of Fuqua's sUAS.

Conducting aerial photography and videography with Fuqua's sUASs and others like it, instead of manned aircraft, will greatly benefit the public by drastically reducing the levels of air and noise pollution generated during traditional aerial video and photography flight operations. By using battery power and electric motors, Fuqua's sUASs produce no air pollution, and are the most viable environmentally conscious alternative to the six cylinder internal combustion engine aircraft that are typically utilized for aerial video and photography, while burning approximately 20-30 gallons per hour of leaded aviation fuel. Fuqua's sUASs, and others like them, while reducing the carbon footprint of aerial photography or videography, also eliminate noise pollution, as such sUASs are propelled by battery powered electric motors, rather than an internal combustion engine. Finally, by using sUAS such as Fuqua's to perform aerial photography or videography, the substantial risk to life and property in the air and on the ground, which is usually associated with traditional manned aircraft flight operations, will be substantially reduced or completely eliminated. Aside from the lack of flight crew members located onboard the aircraft, Fuqua's sUASs have less physical potential for collateral damage to life and property on the ground, and in the air, compared to the manned aircraft that typically conduct similar operations (weighing approximately 6,000 pounds with a wingspan of approximately 42 feet, a length of 34 feet, and a fuel capacity of 180 gallons).

(4) Performing Aerial Video and Photography Operations with Fuqua's sUAS Will Benefit the Economy.

In addition to being safe and efficient, Fuqua's sUASs are also an economical alternative to using manned aircraft to conduct similar aerial operations. As such, operation by Fuqua of its sUASs will allow small United States based companies, like Fuqua's, to remain competitive and contribute to growth of the U.S. economy. Specifically, with the rising cost of aviation fuel and the Environmental Protection Agency ("EPA") regulatory actions phasing out leaded aviation fuels, U.S. owned and operated companies must adopt new and alternative technology in order to remain competitive. Operating battery powered sUAS, such as Fuqua's, is one such technology that not only allows companies greater operational flexibility compared to manned aircraft, but provides such flexibility without the high operational cost of a traditional manned aircraft.

By operating its sUASs, companies, such as Fuqua's, can remain competitive and profitable, and therefore, provide greater job stability to employees and contractors, which will ultimately contribute to growth of the U.S. economy. Improved financial performance of U.S. companies, through commercial use of such sUAS, provides a stable workforce that increases consumer spending; improves local, state, and federal tax revenues; and allows companies to invest in research, and development in order to remain competitive both in the United States and abroad.

(5) There are No Privacy Issues.

Similar to the manned aerial photography and videography flight operations that have been conducted for decades, Fuqua's proposed operation of its sUASs will not implicate any privacy issues. Specifically, Fuqua's sUASs will be operated only in compliance with its Operating Documents, which requires property owner involvement as well as local law enforcement notification, and in accordance with the Federal Aviation Regulations and applicable local law.

(e) Granting Fuqua's Exemption Requests would Not Adversely Affect Safety

(1) Summary.

Given the small size of Fuqua's sUASs, and the controlled environment provided, Fuqua's proposed operations will adhere to FMRA's safety requirements. By moving aerial photography and videography to sUAS, the potential for loss of life or property is greatly diminished due to the increased control of smaller, slower, safer aircraft that holds no persons. This enhanced maneuverability allows an operator to safely and quickly avoid hazards in the airspace. Utilizing sUAS minimizes the requirement for conventional aircraft, which benefits the public and provides a greater level of safety. This also decreases pollution and other detrimental environmental effects caused by operating combustible fuel-based, large-scale aircraft for areal photography and videography purposes. Emissions and noise are drastically reduced.

The use of Fuqua's sUASs also eliminates the need for an onboard pilot and crew, and time-consuming adherence to regulations surrounding bookkeeping and submission of flight paths to local airports. Furthermore, the consequences of a lightweight sUAS crashing are obviously drastically less than those that would result from a full-size helicopter or fixed-wing aircraft. It is not unrealistic to project that crashing a 6.7 pound sUAS would cause only minimal damage. The sUASs to be operated hereunder are equal to or less than 6.7 pounds fully loaded, carry neither a pilot nor passenger, and operate exclusively within a secured and designated area. Fuqua's proposed operations under this exemption will be tightly controlled and monitored by Fuqua, and under the requirements and in compliance with FAA and local public safety requirements. The maximum altitude for any operation will not exceed 400 feet AGL. Operations will only be conducted in daylight and within visual line of sight. These safety enhancements provide a greater degree of safety to the public and property owners than conventional operations conducted with airworthiness certificates issued under 14 C.F.R. Part 21, Subpart H. Finally, the aircraft will not be operated within five (5) nautical miles of any airport, and appropriate notice will be given to the local Flight Service District Office (FSDO) prior to flight operations.

Given the diminutive size and weight of Fuqua's sUASs, combined with their operation in well-controlled areas, these sUASs fall within Congress's contemplated safety zone. Fuqua will not operate its sUASs near airports as discussed above, and will not operate them in restricted airspace or over congested areas. Fuqua will operate its sUASs only on grounds with cordoned-off areas or areas under control of the property owner or client. Fuqua will determine the areas needed to fulfill the clients' goals, and only operate its sUASs in these flight zones, and only in compliance with the restrictions imposed by the FAA.

Finally, application of the same criteria demonstrates that there is no credible threat to national security posed by Fuqua's sUASs, due to their size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load. Accordingly, Fuqua's sUASs will operate at and above current safety levels.

In seeking this exemption, Fuqua submits that its sUASs can operate safely in the NAS pursuant to FMRA Section 333, as demonstrated by: (a) the characteristics of Fuqua's sUASs; (b) the pilot certification requirements; and (c) the specific operating limitations.

(2) The Technical Specifications of Fuqua's sUASs Demonstrate its Safe Characteristics.

The proposed use of Fuqua's sUASs do not create a hazard to users of the NAS or the public, or otherwise pose a threat to national security, considering their size, weight, speed, and operational capability.

(a) Technical Specifications Of Fuqua's sUASs: The technical specifications of Fuqua's DJI Phantom 2 and DJI Inspire 1 have previously been submitted to the FAA with other exemption requests.

(b) Fuqua's sUASs Computer Assisted Flight And Navigation Modes Enable The sUASs To Remain Within A Defined Operational Area: Fuqua's sUASs may be operated in both manual and computer assisted flight modes. A complete description of the flight and navigational modes of Fuqua's DJI Phantom 2 and DJI Inspire 1 have previously been submitted to the FAA with other exemption requests.

(3) (c) Fuqua's sUASs 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, Fuqua's UAs will remains stationary, in flight, for 3 seconds or more. If, after 3 seconds, any of Fuqua's UAs does not reacquire control link data from the GCS, such UA will assume that the Control Link is lost, and the UA will return to the home position (i.e., failsafe mode) via GPS, and will descend to the takeoff position and shutdown. Flight Operations of Fuqua's sUASs will be Limited to the Line of Sight of a Certificated Pilot in Command with a Visual Observer.

To act as a pilot in command (PIC) of its sUASs, Fuqua will only utilize pilots who possess a current and valid (1) Sports or Recreational Pilot Certificate, and (2) U.S. driver's license. Additionally, for greater safety a visual observer (VO) will assist all pilots during flight time.

(4) Flights of Fuqua's sUASs Will be Conducted Pursuant to Specific Operating Limitations.

In seeking this exemption, Fuqua proposes to operate commercially its sUASs for the special purpose of conducting aerial video and photography over certain areas of United States pursuant to the following specific operating limitations, and as specified in the FAA's exemption authorization:

(a) Operations will be limited to the following aircraft: rotorcraft sUASs weighing less than 6.7 pounds maximum gross weight i.e. DJI Phantom 2 and DJI Inspire 1.

(b) Operations will be limited to operations conducted for the purpose of aerial video and photography for Fuqua's targeted clients, as described in Article II, above.

(c) The sUASs will not be flown at an indicated airspeed exceeding 43 knots (22 m/s) and will only operate in flight in phases or segments of equal to or less than 20 minutes. In no case will Fuqua's sUASs be operated at airspeeds greater than the maximum UA operating airspeed recommended by the manufacturer for the applicable sUAS.

(d) Operations will not be conducted in restricted airspace or over congested areas and will only be conducted as specified in the COA granted by the FAA.

(e) Fuqua's sUASs will be operated at an altitude of no more than 400 feet above ground level (AGL) and less than 2000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC. All altitudes reported to ATC will be in feet AGL.

(f) Fuqua's sUASs 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 airman medical certificate, if applicable, or U.S. driver's license.

(g) The use of first person view (FPV) by the PIC or the VO will not be permitted.

(h) All operations will utilize a VO. 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 functions prescribed in the Operating Documents.

(i) The VO will 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.

(j) The Operating Documents, including the grant of exemption, will be accessible during Fuqua's sUASs operations, and will be 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 will be followed. Otherwise, the Operator will follow the procedures as outlined in its Operating Documents. The Operator and/or manufacturer 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 upon request. The Operator must also present updated and revised documents if it petitions for extension or amendment to the grant of exemption. If the Operator determines that any update or revision would affect the basis upon which the FAA granted the exemption, then the Operator must petition for amendment to its grant of exemption. The FAA's UAS Integration Office (AFS-80) will be contacted if questions arise regarding updates or revisions to the operating documents.

(k) Prior to each flight the PIC will inspect the sUAS to be utilized to ensure that it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the sUAS, the aircraft will be prohibited from operating until the necessary maintenance has been performed and the sUAS is found to be in a condition for safe flight. The GCS must be included in the preflight inspection. All maintenance and alterations will be properly documented in the aircraft records.

(l) If Fuqua's sUASs have undergone maintenance or alterations that affect their operation or flight characteristics, *e.g*. replacement of a flight critical component, such altered sUAS will undergo a functional test flight. The PIC who conducts the functional test flight must make an entry in the aircraft records. Functional flight test flights will 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 not to pose an undue hazard to persons and/or property.

(m) The Operator will be responsible for maintaining and inspecting its sUASs to ensure each is in a condition for safe operation.

(n) The pre-flight inspection will account for all potential discrepancies, *e.g.* inoperable components, items, or equipment, not already covered in the relevant sections of the Operating Documents.

(o) The Operator will follow the sUASs' manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.

(p) The Operator will 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 each of Fuqua's sUASs to service.

(q) Fuqua's sUASs will comply with all manufacturer Safety Bulletins.

(r) For each of Fuqua's sUASs, the authorized person will make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.

(s) The PIC of each of Fuqua's sUASs will possess (i) at least a Recreational or Sport Pilot Certificate; (ii) at least a current third-class or higher medical certificate, or a valid U.S. driver's license, and (iii) at least 25 documented hours operating the applicable Fuqua sUAS or one identical to it.

(t) The Operator will not permit any PIC to operate unless the PIC meets the Operator's qualification criteria, and demonstrates the ability to safely operate the applicable Fuqua sUAS in a manner consistent with how such sUAS will be operated under the exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. Flights for the purposes of training the operator's PICs are permitted under the terms of the 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 applicable sUA with appropriate distance from nonparticipants in accordance with 14 C.F.R. § 91.119 or as otherwise required by the FAA.

(u) Fuqua's sUASs operations will not be conducted during night, as defined in 14 C.F.R. § 1.1. All operations must be conducted under visual meteorological conditions (VMC) during daytime and pursuant to VFR rules. Flights under special visual flight rules (SVFR) are not authorized.

(v) The UA will not operate within 5 nautical miles of an airport reference point as denoted on a current FAA Airport/Facility Directory (AFD), or, for airports not designated with an AFD, 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 as otherwise permitted by a COA issued to Fuqua. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

(w) If any of Fuqua's sUASs loses communications or loses its GPS signal, it will return to a predetermined location within the planned operating area, and land or be recovered in accordance with the Operating Documents.

(x) The PIC will abort the flight in the event of unpredicted obstacles or emergencies.

(y) The PIC will be prohibited from beginning a flight unless (considering wind and forecast weather conditions) unless there is enough power to fly at normal cruising speed to the intended landing point and land the UA with 25% battery power remaining.

(z) All operations will be conducted in accordance with the Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) issued pursuant to the grant of exemption. Fuqua will apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the COA issued pursuant to the exemption.

(aa) All aircraft operated in accordance with the exemption will 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 will be as large as practicable. The equivalent level of safety will be provided by having each of Fuqua's sUASs marked on its fuselage as required by Section 45.29(f) where the pilot, observer and others working with the such sUAS will see the identification.

(bb) The documents required to ensure the safe operation and flight of each sUAS and any document referred to by 14 C.F.R. §91.9 and §91.203 will be available to the PIC at the Ground Control Station of such sUAS any time the sUAS is operating. These documents will be made available to the Administrator or any law enforcement official upon request.

(cc) Fuqua's sUASs will remain clear and yield the right of way to all manned aviation operations and activities at all times.

(dd) Fuqua's sUASs will not be operated by the PIC from any moving device or vehicle.

(ee) Flight operations will be in a confined area with a set safety perimeter, the boundaries of which are determined by Fuqua personnel and coordinated with ATC, other FAA personnel, and local government officials, as applicable.

(ff) Flight operations will 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:

> (i). Barriers or structures are present that sufficiently protect nonparticipating persons from the sUA and/or debris in the event of an accident. The operator will ensure that nonparticipating persons remain under such protection. If a situation arises where a nonparticipating person leaves such protection and is within 500 feet of the sUAS, flight operations must cease immediately and/or;
>
> (ii). 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.

The Operator, PIC, VO, operator trainees or essential persons will not be considered non-participatory persons.

(gg) All operations will 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.

(hh) All operations will be conducted with all required permissions and permits from any city, county or state jurisdiction, including local law enforcement, fire or other appropriate governmental agencies.

(ii) 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 must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB website: www.ntsb.gov.

(jj) Fuqua will subscribe to relevant weather and safety alerts.

(5) Reasons Why an Exemption from the Requirements of Section 61.113(a) and (b) Would Not Adversely Affect Safety.

Fuqua submits that the equivalent level of safety established by Section 61.113(a) and (b) will be maintained as no PIC will be allowed to operate a sUAS unless that PIC has demonstrated that the PIC is able to safely operate the applicable Fuqua sUAS in a manner consistent with the exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

(6) Reasons Why an Exemption from the Requirements of Section 91.7(a) Would not Adversely Affect Safety.

The equivalent level of safety established by Section 91.7(a) will be maintained because prior to every flight, as Fuqua will ensure that each of its sUAS is in an airworthy condition based upon such sUAS's compliance with its Operating Documents, and as stated in the conditions and limitations herein.

(7) Reasons Why an Exemption from the Requirements of Section 91.121 Would not Adversely Affect Safety.

The equivalent level of safety established by Section 91.121 will be maintained because the altitude information of each of Fuqua's sUASs will be provided to the PIC via GPS equipment and a radio communications telemetry data link, which downlinks from the applicable UA to the GCS for active monitoring of the flight path and altitude. This altitude information, combined with Fuqua's operation of its sUASs within visual line of sight, at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121. The altitude information will be generated by GPS equipment installed onboard the aircraft. Prior to each flight, a zero altitude initiation point is automatically established by the sUAS at ground level.

(8) Reasons Why an Exemption from the Requirements of Section 91.151(a)(1) Would not Adversely Affect Safety.

A grant of this exemption would ensure an equivalent level of safety established by 14 C.F.R. Section 91.151(a)(1) as a result of (a) the technical specifications of Fuqua's sUASs; (b) the limitations on the proposed flight operations; and (c) the location of the proposed flight operations. Accordingly, Fuqua will ensure that it will safely operate its sUASs during daylight hours in VFR conditions, with enough battery power to fly for a total duration of 15 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 5 minutes.

Here, as in Exemption No. 11240, the technical specifications of Fuqua's sUASs, the limitations on the proposed flight operations; and the location of the proposed operations, will ensure an equivalent level of safety established by 14 C.F.R. Section 91.151(a)(1). Furthermore, safety will be ensured as Fuqua's sUASs will provide audible and visual warnings to the PIC at the GCS when such sUAS 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, Fuqua's sUASs will descend and land automatically. Significantly, previous exemptions granted by the FAA concerning Section 91.151 establish that safety is not adversely affected when the technical characteristics and operating limitations of the sUAS are considered. Relief has been granted for manned aircraft to operate at less than the minimums prescribed in Section 91.151, including Exemption Nos. 2689, 5745, and 10650.

(9) Reasons Why an Exemption from the Requirements of Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) Would not Adversely Affect Safety.

In seeking this exemption, Fuqua submits that the equivalent level of safety with regard to the regulatory maintenance and alteration requirements established by Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) will be met because Fuqua will use trained technicians to perform maintenance, alterations, or preventive maintenance on its sUASs using the methods, techniques, and practices prescribed in the applicable Operating Documents. Furthermore, Fuqua will document and maintain all maintenance records for its sUASs.

Since Fuqua's sUASs will be inspected as prescribed by the applicable Operating Documents, Fuqua will maintain the equivalent level of safety established by Sections 91.405(a), 91.409(a)(1), and 91.409(a)(2).

Furthermore, the exemption sought would maintain an equivalent level of safety established by Sections 91.407, 91.417(a) and 91.417(b), because all maintenance of Fuqua's sUASs will be performed by trained technicians. Maintenance will be documented and maintained utilizing the monthly maintenance log. Significantly, previous exemptions granted by the FAA concerning Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) establish that safety is not adversely affected when the technical characteristics and operating limitations of the applicable sUAS are considered.

In consideration of Fuqua's proposed operating limitations, the Operating Documents, and the technical aspects of Fuqua's sUASs, Fuqua's submits that safety will not be adversely affected by granting exemption from 14 C.F.R. Sections 91.405(a), 91.407(a)(1), and (a)(2), 91.409(a)(2), and 91.417(a) and (b).

(10) The FAA may prescribe any other conditions for safe operation.

In accordance with Section 333 of FMRA and 14 C.F.R. § 21.16 entitled Special Conditions, Fuqua requests that the FAA prescribe special conditions for the intended operation of its sUASs, which contain such safety standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R. §§ 61.23(a) & (c), 61.101 (e)(4) & (5), 61.113(a) & (b), 61.315(a), 91.7 (a), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b). Such special conditions will permit safe operation of Fuqua's sUASs for the limited purpose of conducting aerial video and photography over certain areas of the United States for compensation or hire. FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise post a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification in accordance with any requirements that must be established for the safe operation of the UAS in the NAS. Likewise, the Administrator may prescribe special conditions pursuant to 14 C.F.R. § 21.16, for operation of Fuqua's sUASs, if the airworthiness regulations of 14 C.F.R. Part 21 do not contain adequate or appropriate safety standards due to the novel or unusual design features of the sUAS. Section 21.16, entitled Special Conditions, states the following:

> If the FAA finds that the airworthiness regulations of this subchapter do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature of the aircraft, aircraft engine or propeller, he prescribes special conditions and amendments thereto for the product. The special conditions are issued in accordance with Part 11 of this chapter and contain such safety standards for the aircraft, aircraft engine or propeller as the FAA finds necessary to establish a level of safety equivalent to that established in the regulations. See 14 C.F.R. § 21.16.

Therefore, in accordance with FMRA Section 333 and 14 C.F.R. § 21.16, the FAA may prescribe special conditions for Fuqua's intended operation of its sUASs, which contain such safety

standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R. Sections 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91,417(a) & (b).

(f) Summary that can be Published in the Federal Register

In accordance with 14 C.F.R. Part 11, the summary below is provided for publication in the Federal Register, should it be determined that publication is warranted:

Applicant seeks an exemption from the following rules: 14 C.F.R. Part 21, subpart H; 14 C.F.R. § 45.23; 14 C.F.R. § 45.27(a); 14 C.F.R. § 61.23(a) & (c),§ 61.101 (e)(4), § 61.113(a) & (b); 14 C.F.R. § 61.315; 14 C.F.R. § 91.7(a); 14 C.F.R. § 91.9(b)(2); 14 C.F.R. § 91.103; 14 C.F.R. § 91.119; 14 C.F.R. § 91.121; 14 C.F.R. § 91.151(a); 14 C.F.R. § 91.405(a); 14 C.F.R. § 91.407(a)(1); 14 C.F.R. § 91.407(a)(1); 14 C.F.R. § 91.409(a)(2); and 14 C.F.R. § 91.417(a) & (b) to operate commercially a small unmanned vehicle in aerial photography and videography over certain areas of the United States.

However, Fuqua submits that good cause exists for not publishing a summary of the petition in the Federal Register as the exemptions requested by Fuqua would not set a precedent, and any delay in acting on the petition would be detrimental to the petitioner.

(g) Any Additional Information, Views, Or Arguments Available to Support FUQUA's Request

This Petition is made pursuant to the FMRA Section 333, which directs the Secretary of Transportation to determine if certain UAS may operate safely in the NAS. As such, Fuqua's request for exemption may be granted pursuant to the authority of FMRA Section 333 and 14 C.F.R. Part 11, as set forth above. FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification. As discussed in detail above, Fuqua will operate its sUASs safely in the NAS, without creating a hazard to users of the NAS, or the public or otherwise pose a threat to national security.

(h) Request for Summary Grant

Fuqua requests that the FAA issue a summary grant with respect to the exemptions requested for Fuqua's sUASs as grants have been given previously to other operators who are operating the same sUASs, e.g. Exemptions Nos. 11062, 11109, 11112, 11213, 11641, 11639, 11240, 11654,11656, 11658, 11659, 11660, 11663, 11664, 11655, 11669, 11670, 11672, 11639, 11641, 11642, 11644, 11626.

## V. CONCLUSION

Applicant seeks exemptions pursuant to 14 C.F.R. § 11.61 and Section 333 of FMRA which will permit safe operation of its sUASs, 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 as set forth in FMRA, while also advancing the interests of the public by allowing Fuqua to safely, efficiently and economically operate its sUASs commercially within the NAS. In addition, Fuqua requests that it receive a summary grant with respect to its petition as the FAA has previously granted exemption relief to other operators of sUAS in circumstances similar in all material respects to the ones presented by Fuqua.

Wherefore, in accordance with the FARS and FMRA, Fuqua respectfully requests that the Administrator grant this petition for exemptions from the requirements of the sections set forth in Article I above of Title 14 of the Code of Federal Regulations, and permit Fuqua to operate its sUASs for the purpose of providing commercial aerial video and photography to its clients as set forth in Article II above over certain areas of the United States.

DATE: June 3, 2015

Respectfully submitted,

Winn Fuqua

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