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

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

September 14, 2015

Exemption No. 12846
Regulatory Docket No. FAA−2015−2100

Mr. Michael M. Brouder
Above and Beyond Productions, LLC
13237 Snow Owl Drive
Carmel, IN 46033

Dear Mr. Brouder:

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

By letter dated May 21, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Above and Beyond Productions, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial video and photography of agricultural lands, architecture and construction, real estate, special events, and landscapes.

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 Inspire 1 and DJI F550.

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, Above and Beyond Productions, LLC is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

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

Conditions and Limitations

In this grant of exemption, Above and Beyond Productions, 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 Inspire 1 and DJI F550 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:
ABOVE AND BEYOND PRODUCTIONS, LLC
FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF TITLE 14 OF THE CODE OF FEDERAL REGULATIONS SECTION 21, SUBPART H; §45.23(b), 61.113(a) and (b), 91.7(a), 91.9(b)(2), 91.103 (b), 91.109, 91.119, 91.121, 91.151(b), 91.203 (a) & (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) & (b),
CONCERNING COMMERCIAL OPERATION OF DJI INSPIRE 1 & DJI F550 UNMANNED AIRCRAFT SYSTEMS PURSUANT TO SECTION 333 OF THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)

Submitted, May 21, 2015

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GLOSSARY OF ABBREVIATIONS

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

FAR Federal Aviation Regulation

GCS Ground Control Station

GPS Global Positioning System

LOL Loss of Link

NAS National Airspace System

NOTAM Notice to Airman

PIC Pilot In Command

SO Safety Observer

SOP Standard Operating Procedures

UA Unmanned Aircraft

UAS Unmanned Aircraft System

VFR Visual Flight Rules

VLOS Visual Line of Site

VMC Visual Meteorological Conditions

VTOL Vertical Takeoff and Landing

OVERVIEW

Above and Beyond Productions, LLC seeks exemption from the requirements of 14 C.F.R. 21, subpart H; §45.23(b), 61.113(a) and (b), 91.7(a), 91.9(b)(2), 91.103 (b), 91.109, 91.119, 91.121, 91.151(b), 91.203 (a) & (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) & (b), to operate an Unmanned Aircraft System pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). This exemption will permit Above and Beyond Productions LLC to operate an Unmanned Aircraft System (UAS) for the commercial purpose of conducting aerial video and photography of agricultural lands, architecture and construction, real estate, special events, and landscapes within the United States.

INTRODUCTION AND INTERESTS OF THE PETITIONER

Above and Beyond Productions LLC will provide its clients with the high quality digital video content for use in their commercial, personal, and non-profit multimedia projects. Above and Beyond Productions LLC brings over 25 years of broadcast television production, direction, editing and professional marketing expertise, along with state-of-the-art technology to make studio quality productions within reach for organizations of any size.

Above and Beyond Productions LLC has over 2 years recreational/hobby experience in all aspects of aerial video and photography and is an active member in good standing with the Academy of Model Aeronautics (AMA). Additionally, Above and Beyond Productions LLC benefits from graduate-level coursework at Ball State University relating to the current regulatory, privacy and safety issues relating to commercial and private UAV use in the United States. The objective of Above and Beyond Productions LLC's aerial video and photography operations is to provide high quality imaging for a variety of commercial, public, and residential uses, specifically targeting:

- Promotional corporate videos for businesses, non-profits & local government entities
- Edited videos to supplement commercial and residential real estate listings
- Aerial event filming and photography to promote travel and tourism
- Agricultural surveys and environmental monitoring

BACKGROUND

Unmanned Aircraft Systems: DJI Inspire 1 & DJI F550 Flamewheel UAS

Above and Beyond Productions LLC seeks an exemption to operate multiple DJI Systems UAVs for compensation or hire within the NAS. The DJI Inspire 1 (Inspire) is a vertical takeoff and landing (VTOL) Unmanned Aircraft (UA) with a Ground Control Station (GCS) utilizing electronic tablet or smart phone systems. The Inspire is an electric powered

rotary wing UAS that is capable of transmitting live airborne video images and location information to a Ground Control Station (GCS). The Inspire stores the photographs and data on board and makes them available for download after completion of the flight. The Inspire 1 is 22 in x 22 in x 8 in and weighs 6.4 pounds, well under the 55 lbs. mandated in the FMRA. The Inspire can conduct hovering flight and has a maximum cruising speed of 42 knots. It is battery powered, has a flight endurance of no more than 22 minutes and can operate in temperatures ranging from 0° to 40° C. The Inspire's omni-directional antenna has a range of 2.1 km and operates in the 2.420 – 2.483 GHz frequency range.

The DJI F550 Flamewheel is a 6-propeller multirotor vertical takeoff and landing (VTOL) Unmanned Aircraft (UA) capable of transmitting live airborne video images and telemetry information to a Ground Control Station (GCS) and utilizes NAZA-M V2 Flight Controller for GPS navigation. The F550's total weight with maximum allowable payload is 6.5lbs and measures 21.65" wide and 10.5" tall with landing gear. The F550 maximum airspeed is 30kts. The F550 is controlled by a Futaba T8FG 14-Channel Radio Control System operating at 2.4 GHz.

BASIS FOR PETITION

Petitioner, Above and Beyond Productions LLC, pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012 (FMRA), Section 333, *Special Rules for Certain Unmanned Aircraft Systems*, hereby petitions the Administrator to commercially operate the DJI Inspire 1 in the National Airspace System (NAS), and for an exemption from the requirements of 14 C.F.R. §45.23(b), 61.113(a) and (b), 91.9(b)(2), 91.103 (b), 91.109, 91.119, and 91.203 (a) & (b).

In consideration of the speed, weight, size, and limited operating area associated with the unmanned aircraft and their operation, Above and Beyond Productions' operation of the DJI Inspire 1 and DJI F550 Flamewheel UASs meets the conditions of FMRA Section 333 and therefore, will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

Accordingly, Above and Beyond Productions LLC requests relief from Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), as these sections set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate.

Above and Beyond Productions LLC submits that the requested relief is proper since an equivalent level of safety will be ensured. Above and Beyond Productions LLC will use experienced personnel or technicians to perform maintenance, alterations, or preventive maintenance on the UASs using the methods, techniques, and practices prescribed in the operating documents (i.e., Monthly Maintenance Log, and DJI Inspire 1 Instruction and Maintenance Manuals). Furthermore, Above and Beyond Productions LLC will document and maintain all maintenance records for the DJI Inspire 1 UAS.

Above and Beyond Productions LLC seeks relief from Section 91.7(a), entitled *Civil aircraft airworthiness*, because the DJI Inspire 1 UAS do not require an airworthiness

certificate in accordance with 14 C.F.R. Part 21, Subpart H. As such, Above and Beyond Productions LLC submits that it will ensure that the DJI Inspire 1and DJI F550 Flamewheel UAS are in an airworthy condition, prior to every flight by determining that the UASs are in compliance with the operating documents (i.e., Monthly Maintenance Log, and DJI Inspire 1/F550 Instruction Manuals), and that the aircraft are in a condition for safe flight.

Above and Beyond Productions LLC also seeks an exemption from the requirements of Section 91.121, entitled *Altimeter Settings*, as the DJI Inspire 1 and DJI F550 UA will not have a typical barometric altimeter onboard. However, altitude information of the DJI Inspire 1 and DJI F550 UA will be provided to the PIC via Global Positioning System (GPS) equipment and radio communications telemetry data link, which downlinks from the UA to the GCS for active monitoring of the flight path. This altitude information, combined with Above and Beyond Productions LLC's operation of the DJI Inspire 1 and DJI F550 UAS within visual line of sight, at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121.

Additionally, Above and Beyond Productions LLC seeks an exemption from the requirements of Section 91.151(b), entitled *Fuel requirements for flight in VFR conditions*. Above and Beyond Productions LLC submits that safety will not be affected by operation of the DJI Inspire 1 and DJI F550 UA during daylight hours in visual meteorological conditions (VMC) under visual flight rules (VFR), with enough battery power to fly for a total duration of approximately 13.5 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 4.5 minutes.

In accordance with 14 C.F.R. § 11.81, Above and Beyond Productions 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 is:

Michael M. Brouder
Above and Beyond Productions, LLC
13237 Snow Owl Drive
Carmel, IN 46033
Tel: (317) 220-0354
michaelbrouder@mac.com

B. The Specific Sections of 14 C.F.R. From Which Above and Beyond Productions LLC Seeks Exemption

1. Above and Beyond Productions LLC seeks exemption from the requirements of Section 21 Subpart H and 14 C.F.R. 91: Airworthiness

14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR § 91.203(a)(1). The size, weight and enclosed operational area of Above and Beyond LLC's UASs permit exemption from Part 21 because Above and Beyond LLC's UASs meet an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701(f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UASs from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. Above and Beyond LLC's UASs meet or exceed each of the elements.

14 C.F.R. §91.9(b)(2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UASs, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual at the flight operations center. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. §91.121 regarding altimeter settings is inapplicable insofar as Above and Beyond LLC's UASs utilize electronic global positioning systems and internal gyroscopes to provide spatial coordination.

14 C.F.R. §§91.203(a) and (b) provide for the carrying of civil aircraft certifications and registrations. Similar to, 14 CFR 91.9 (b) (2), given the size and configuration, the UAS has no ability to carry certificate and registration documents on the aircraft. There is no room, capacity, or pilot on board to adequately such documents. An equivalent level of safety will be achieved by keeping these documents, to the extent they are applicable to the UAS, at the ground control point where pilot has immediate access to them.

C. Extent of Relief of the Specific Sections Of 14 C.F.R. and Reason From Which Above and Beyond Productions LLC Seeks Relief

1. Extent Of Relief Above and Beyond Productions LLC Seeks And The Reason Above and Beyond Productions LLC Seeks Relief From 14 C.F.R. 45.23: Marking of the Aircraft.

Applicable FARs require aircraft to be marked according to certain specifications. Above and Beyond LLC's UASs are, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft. Regardless, Above and Beyond LLC will mark its UASs in the largest possible lettering by placing the word "EXPERIMENTAL" on its fuselage as required by 14 C.F.R. §45.29(f) so that the pilot, camera operator, spotter and others working with the UAS will see the

markings. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

2. Extent Of Relief Above and Beyond Productions LLC Seeks And The Reason Above and Beyond Productions LLC Seeks Relief From Section 61.113(a) and (b): Private pilot privileges and limitations: Pilot in command.

Relief from Section 61.113(a) and (b) entitled *Private pilot privileges and limitations: Pilot in command*, is requested to the extent necessary to allow a PIC holding a private pilot or higher level certificate, as well as a current and valid airman medical certificate, and who has met certain flight-hour and currency requirements, to conduct the proposed UAS flight operations for compensation or hire.

This relief is requested since the limitations set forth in Section 61.113(a) and (b) state that a private pilot may, for compensation or hire, act as PIC of an aircraft in connection with any business or employment if: (1) The flight is only incidental to that business or employment; and (2) The aircraft does not carry passengers or property for compensation or hire.

As set forth more fully below, Above and Beyond Productions LLC submits that an equivalent level of safety will be maintained because no PIC will be allowed to operate the DJI Inspire 1 UAS UA unless that PIC has met certain flight-hour and currency requirements, demonstrating that the PIC is able to safely operate either the DJI Inspire and DJI F550 Flamewheel UAS in a manner consistent with the operations specifications as described in this exemption, including evasive and emergency maneuvers, as well as maintaining appropriate distances from people, vessels, vehicles and structures.
Further, Above and Beyond Productions LLC submits that all flights of the DJI Inspire and DJI F550 Flamewheel UAS, conducted by the PIC pursuant to the grant of this Petition: (1) will be incidental to Above and Beyond Productions LLC business; and (2) will not carry passengers or property for compensation or hire.

3. Extent Of Relief Above and Beyond Productions LLC Seeks And The Above and Beyond Productions LLC Seeks Relief From Section 91.7(a).

Relief from Section 91.7(a) entitled *Civil aircraft airworthiness*, is requested to the extent required to allow Above and Beyond Productions LLC to determine that the DJI Inspire and DJI F550 Flamewheel UASs are in airworthy condition prior to every flight by ensuring that the UAS is in compliance with the operating documents (i.e., the DJI Inspire and DJI F550 Flamewheel Maintenance Manual, Monthly Maintenance Log, and DJI Inspire and DJI F550 Flamewheel Instruction Manual).

Above and Beyond Productions LLC seeks the requested relief because the DJI Inspire and DJI F550 Flamewheel UASs do not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Therefore, Above and Beyond

Productions LLC will ensure that the DJI Inspire and DJI F550 Flamewheel UASs are in airworthy condition based upon its compliance with the operating documents (i.e., Monthly Maintenance Log, and DJI Inspire and DJI F550 Flamewheel Instruction Manual) prior to every flight, and further, determine that the aircraft are in condition for safe flight, as stated in the conditions and limitations below.

4. Extent Of Relief Above and Beyond Productions LLC Seeks And The Above and Beyond Productions LLC Seeks Relief From Section 91.103: Preflight Action.

This regulation requires each pilot in command to take certain actions before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be provided for the aircraft, an exemption will be needed. An equivalent level of safety will be provided as set forth in the DJI Inspire and DJI F550 Flamewheel Instruction Manual. Additionally, the PIC will take all actions including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data before initiation of flight.

5. Extent Of Relief Above and Beyond Productions LLC Seeks And The Above and Beyond Productions LLC Seeks Relief From Section 91.119: Minimum Safe Altitudes.

14 C.F.R. §91.119 prescribes safe altitudes for the operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. Above and Beyond LLCs UASs will not operate at an altitude greater than 400 feet above ground level. Given the size, weight, maneuverability and speed of Above and Beyond LLC's UASs, an equivalent level of safety will be achieved.

6. Extent Of Relief Above and Beyond Productions LLC Seeks And The Above and Beyond Productions LLC Relief From Section 91.151(b).

Relief from Section 91.151(b) entitled Fuel requirements for flight in VFR conditions, is requested to the extent required to allow flights of the battery powered DJI Inspire and DJI F550 Flamewheel UAs during daylight hours in visual meteorological conditions (VMC), under visual flight rules (VFR), for a total duration of 13.5 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 4.5 minutes.

Above and Beyond Productions LLC seeks the requested relief because without an exemption from Section 91.151(b), the flight time duration of the battery powered DJI Inspire and DJI F550 Flamewheel UA will severely constrain the practicality of any aerial video or still photo flight operations that Above and Beyond Productions proposes to conduct pursuant to this Petition.

Significantly, as set forth below, the technical specifications of the DJI Inspire and DJI F550 Flamewheel UAS, the DJI Inspire and DJI F550 Flamewheel operating documents, and Above and Beyond Productions LLC's proposed operating limitations, ensure that Above and Beyond Productions LLC will safely operate the battery powered DJI Inspire and DJI F550 Flamewheel UAs during daylight hours in visual

meteorological conditions (VMC), under visual flight rules (VFR), with enough battery power to fly for a total duration of 13.5 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 4.5 minutes.

7. Extent Of Relief Above and Beyond Productions LLC Seeks And The Above and Beyond Productions LLC Relief From Sections 14 C.F.R. §§91.405 (a); 407(a)(1); 409(a)(2); 417(a) and (b): Maintenance Inspections.

Since Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) only apply to aircraft with an airworthiness certificate, Above and Beyond Productions LLC requests relief from these Sections because the DJI Inspire and DJI F550 Flamewheel UASs does not require airworthiness certificates. As set forth more fully below, the DJI Inspire and DJI F550 Flamewheel UASs meet the conditions of FMRA Section 333 for operation without an airworthiness certificate. Accordingly, Above and Beyond Productions LLC will use trained technicians to perform maintenance, alterations, or preventive maintenance on the UASs using the methods, techniques, and practices prescribed in the UAS operating documents (i.e., the DJI Inspire and DJI F550 Flamewheel Maintenance Manual, Monthly Maintenance Log, and DJI Inspire and DJI F550 Flamewheel Instruction Manual). Furthermore, Above and Beyond Productions will document and maintain all maintenance records for the DJI Inspire and DJI F550 Flamewheel UAS.

D. The Reasons Why Granting Above and Beyond Productions LLC Request Would Be In The Public Interest; That Is, How It Would Benefit The Public As A Whole.

Granting the present Petition will further the public interest by allowing Above and Beyond Productions LLC to safely, efficiently, and economically conduct aerial video and photography of agricultural lands, architecture and construction, real estate, special events, and landscapes within the United States.

Additionally, use of the DJI Inspire and DJI F550 Flamewheel UAS will decrease congestion of the NAS, reduce pollution, and provide significant benefits to the economy. Notably, the benefits of Above and Beyond Productions LLC's proposed operation of the DJI Inspire and DJI F550 Flamewheel UASs will be realized without implicating any privacy issues.

1. The Public Will Benefit From Decreased Congestion Of The NAS.

The DJI Inspire and DJI F550 Flamewheel UASs are battery powered and serve as a safe, efficient, and economical alternative to the manned aircraft traditionally utilized to obtain aerial imagery. By reducing the amount of manned aircraft needed to perform aerial acquisitions, an exemption allowing the use of a DJI Inspire and DJI F550 Flamewheel UASs 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. The DJI Inspire and DJI F550 Flamewheel UASs 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.

2. The Public Will Benefit From The Safety And Efficiency Of The DJI Inspire and DJI F550 Flamewheel UAS.

Conducting aerial acquisitions with the DJI Inspire and DJI F550 Flamewheel UASs, 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 still photography flight operations. By using battery power and electric motors, the DJI Inspire and DJI F550 Flamewheel UASs produce no air pollution, and is the most viable environmentally conscious alternative to the cabin class, 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. The DJI Inspire and DJI F550 Flamewheel UASs, while reducing the carbon footprint of aerial acquisitions, also eliminates noise pollution, as the UASs are propelled by battery powered electric motors, rather than an internal combustion engine.

By using the DJI Inspire and DJI F550 Flamewheel UASs to perform aerial acquisitions, 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, the DJI Inspire and DJI F550 Flamewheel UASs (weighing approximately 6.5 pounds maximum gross weights with a length and width between 17.3 inches and 21 inches, and with no fuel on board), has 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).

3. Performing Aerial Video and Photography Operations With The DJI Inspire and DJI F550 Flamewheel UAS Will Benefit The Economy.

In addition to being safe and efficient, the DJI Inspire and DJI F550 Flamewheel is also an economical alternative to using manned aircraft to conduct similar aerial operations. As such, operation of the DJI Inspire and DJI F550 Flamewheel UAS will allow United States based companies, like Above and Beyond Productions LLC, 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 the battery powered DJI Inspire and DJI F550 Flamewheel UAS 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 the DJI Inspire and DJI F550 Flamewheel UASs, companies such as Above and Beyond Productions LLC, 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 the DJI Inspire and DJI F550 Flamewheel UASs, 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.

4. There Are No Privacy Issues.

Similar to the manned aerial acquisition flight operations that have been conducted for decades, Above and Beyond Productions LLC's proposed operation of the DJI Inspire and DJI F550 Flamewheel UAS will not implicate any privacy issues. Specifically, the DJI Inspire and DJI F550 Flamewheel UAS will be operated only in compliance with the conditions set forth in any exemption granted under this petition.

E. The Reasons Why Granting The Exemption Would Not Adversely Affect Safety, Or How The Exemption Would Provide A Level Of Safety At Least Equal To That Provided By The Rule From Which Above and Beyond Productions LLC Seeks Exemption.

1. Reasons Why The DJI Inspire and DJI F550 Flamewheel Will Meet The Conditions Of The FAA Modernization and Reform Act of 2012 (FMRA) Section 333.

In consideration of the size, weight, speed, and limited operating area associated with the unmanned aircraft and its operation, Above and Beyond Productions LLC operation of the DJI Inspire and DJI F550 Flamewheel UAS meet the conditions of FMRA Section 333, and will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

Section 333 provides authority for a UAS to operate without airworthiness certification and sets forth 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. Specifically, FMRA Section 333 states the following, in part:

> *(a) In General.-- Notwithstanding any other requirement of this subtitle, and not later than 180 days after the date of enactment of this Act, the Secretary of*

Transportation shall determine if certain unmanned aircraft systems may operate safely in the national airspace system before completion of the plan and rulemaking required by section 332 of this Act or the guidance required by section 334 of this Act.

(b) Assessment of Unmanned Aircraft Systems.-- In making the determination under subsection (a), the Secretary shall determine, at a minimum--

(1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; and

(2) whether a certificate of waiver, certificate of authorization, or airworthiness certification under section 44704 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).

(c) Requirements for Safe Operation.--If the Secretary determines under this section that certain unmanned aircraft systems may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft systems in the national airspace system.

In seeking this exemption, Above and Beyond Productions LLC submits that the DJI Inspire and DJI F550 Flamewheel UAS can operate safely in the NAS pursuant to FMRA Section 333, as demonstrated by:

(a) the characteristics of the DJI Inspire and DJI F550 Flamewheel UAS;
(b) the pilot certification requirement; and
(c) the specific operating limitations.

a. The Specifications Of The DJI Inspire and DJI F550 Flamewheel UAS Demonstrate Its Safe Characteristics.

The DJI Inspire and DJI F550 Flamewheel UAS does not create a hazard to users of the NAS or the public, or otherwise pose a threat to national security considering its size, weight, speed, and operational capability.

i. Technical Specifications Of The DJI Inspire and DJI F550 Flamewheel UAS.

The technical specifications of the DJI Inspire and DJI F550 Flamewheel UAS is set forth by the DJI Inspire and DJI F550 Flamewheel Specifications and Data Sheet, attached hereto as Exhibit A.

ii. The DJI Inspire and DJI F550 Flamewheel UAS Autonomous Flight And Navigation Modes Enable The UAS To Remain Within A Defined Operational Area.

The DJI Inspire and DJI F550 Flamewheel UAS may be operated in both manual and fully autonomous flight modes. A complete description of the flight and navigational modes of the DJI Inspire and DJI F550 Flamewheel UAS is provided in the DJI Inspire and DJI F550 Flamewheel User Manual, attached hereto as Exhibit B.

iii. The DJI Inspire and DJI F550 Flamewheel UAS Are Designed For Automatic Return To Home Point Or Hover In The Event Of Loss Of The Control Link Or Navigation.

When the Control Link is lost, the DJI Inspire and DJI F550 Flamewheel UA will remain stationary, in flight, for 3 seconds or more. If, after 3 seconds, the DJI Inspire or DJI F550 Flamewheel UA do not reacquire control link data from the GCS, the 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.

A complete description of the Failsafe Functions of the DJI Inspire and DJI F550 Flamewheel UAS are set forth in the DJI Inspire and DJI F550 Flamewheel User Manual, attached hereto as Exhibit B.

iv. The DJI Inspire and DJI F550 Flamewheel GCS And Its Operation.

A complete description of the operation and specifications of the DJI Inspire and DJI F550 Flamewheel GCS and flight control software is provided in the DJI Inspire and DJI F550 Flamewheel User Manual. DJI Inspire and DJI F550 Flamewheel User Manual is attached hereto as Exhibit B.

b. Flight Operations Of DJI Inspire and DJI F550 Flamewheel UAS Are Limited To The Line Of Sight With a Camera Operator and Safety Observer.

Above and Beyond Productions LLC will fly LOS in daytime hours only, staff each flight with a remote control pilot, camera operator and a spotter/Safety Observer (SO) with communications allowing real time communication among them.

c. Flights Of DJI Inspire and DJI F550 Flamewheel UAS Will Be Conducted Pursuant To Specific Operating Limitations.

In seeking this exemption, proposes to commercially operate DJI Inspire and DJI F550 Flamewheel UAS for the special purpose of conducting aerial video and photography over certain areas of United States, pursuant to the following specific operating limitations:

1. Operations authorized by this grant of exemption will be limited to the following aircraft described in the operating documents, rotorcraft UASs

weighing less than 55 pounds maximum gross weight: DJI Inspire and DJI F550 Flamewheel and DJI F550 Unmanned Aircraft Systems. Proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2. UAS operations under this exemption will be limited to conducting operations for the purpose of aerial video and photography.

3. The UAs may not be flown at an indicated airspeed exceeding 20 knots.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL), as indicated by the procedures specified in the operating documents unless a special request is made and approved by ATC. All altitudes reported to ATC must be in feet AGL.

5. The UAs 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.

6. The use of first person view (FPV) by the PIC or safety observer (SO) is not permitted.

7. All operations must utilize a safety observer (SO). The SO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The SO and PIC must be able to communicate verbally at all times. Electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the SO can perform the functions prescribed in the operating documents.

8. The SO must not perform any other duties beyond assisting the PIC with seeing and avoiding other air traffic and other ground based obstacles/obstructions and is not permitted to operate the camera or other instruments.

9. The operating documents and the grant of exemption must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations contained in the grant of exemption and the procedures outlined in the operating documents, the conditions and limitations contained in the grant of exemption take precedence and must be followed. 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 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) may be contacted if questions arise regarding updates or revisions to the operating documents.

10. Prior to each flight the PIC must inspect the UAS to ensure that it is in a condition for safe flight. 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. The Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

11. 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. The PIC who conducts the functional test flight must make an entry in the aircraft records.

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

13. The operator must follow the UAS manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.

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

15. Each UASs operated under this exemption must comply with all manufacturer Safety Bulletins.

16. The authorized person must make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.

17. The operator may not permit any PIC to operate unless the PIC meets the operator's qualification criteria and demonstrates the ability 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 persons, vessels, vehicles and structures. PIC qualification flight hours must be logged in a manner consistent with 14 C.F.R. § 61.51(b). 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 UA with appropriate distance from nonparticipants in accordance with 14 C.F.R. § 91.119.

17.1. UAS operations may not be conducted during night, and all operations must be conducted under visual meteorological conditions (VMC).

18. The UA may not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

19. 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.

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

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

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

23. Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

24. The UA must remain clear and yield the right of 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. Flight operations must be conducted at least 500 feet from all nonparticipating persons (persons other than the PIC, SO, operator trainees or essential persons), vessels, vehicles, and structures unless:

a. Barriers or structures are present that sufficiently protect nonparticipating persons from the 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 and/or;

b. The aircraft is operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard, and;

c. Operations nearer to the PIC, SO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).

27. All operations shall be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

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).

F. A Summary That Can Be Published In The Federal Register, stating: The Rules From Which Above and Beyond Productions LLC Seeks Exemption:

Above and Beyond Productions LLC seeks exemption from the requirements of 14 C.F.R Sections 61.101(e)(4) and (5), 61.315(a), 61.23(a), 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).

This exemption will permit Above and Beyond Productions LLC to commercially operate an Unmanned Aircraft System (UAS) for the purpose of conducting aerial video and photography over certain areas of the United States.

CONCLUSION

As set forth herein, Above and Beyond Productions LLC seeks an exemption pursuant to 14 C.F.R § 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of the DJI Inspire and DJI F550 Flamewheel UAS commercially, without an airworthiness certificate, for the limited purpose of

conducting aerial video and photography over certain areas of the United States. By granting this Petition, the FAA Administrator will be fulfilling the Congressional mandate of the FAA Modernization and Reform Act of 2012, while also advancing the interests of the public, by allowing Above and Beyond Productions LLC to safely, efficiently, and economically operate the DJI Inspire and DJI F550 Flamewheel UAS commercially within the NAS.

In accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, Above and Beyond Productions LLC respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections 61.101(e)(4) and (5), 61.315(a), 61.23(a), 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), and permit Above and Beyond Productions LLC to operate the DJI Inspire 1 and DJI F550 UASs commercially for the purpose of conducting aerial video and photography over areas of the United States.

Dated: May 21, 2015

Respectfully submitted,

Michael M. Brouder
Above and Beyond Productions, LLC

Exhibits:

A – DJI Inspire and DJI F550 Flamewheel Specifications Data Sheet
B – DJI Inspire and DJI F550 Flamewheel Manufacturer's User Manual
C – DJI Inspire and DJI F550 Flamewheel Maintenance Manual
D – Monthly Maintenance Log

EXHIBIT – A

DJI Inspire and DJI F550 Flamewheel Specifications Data Sheet

DJI INSPIRE 1 TECHNICAL SPECIFICATIONS

Aircraft	**Model** T600 **Weight (Battery Included)** 2935 g **Hovering Accuracy (GPS Mode)** Vertical: 0.5 m Horizontal: 2.5 m **Max** **Angular Velocity** Pitch: 300°/s Yaw: 150°/s **Max Tilt Angle** 35° **Max Ascent Speed** 5 m/s **Max Descent Speed** 4 m/s **Max Speed** 22 m/s (ATTI mode, no wind) **Max Flight Altitude** 4500 m **Max Wind Speed Resistance** 10 m/s **Max Flight Time** Approximately 18 minutes **Motor Model** DJI 3510 **Propeller Model** DJI 1345 **Indoor Hovering** Enabled by default **Operating Temperature Range** -10° to 40° C **Diagonal Distance** 559 to 581 mm **Dimensions** 438x451x301 mm
Gimbal	**Model** ZENMUSE X3 **Output Power (With Camera)** Static: 9 W In Motion: 11 W **Operating Current** Station: 750 mA Motion: 900 mA **Angular Vibration Range** ±0.03° **Mounting** Detachable **Controllable Range** Pitch: -90° to +30°

	Pan: ±320° **Mechanical Range** Pitch: -125° to +45° Pan: ±330° **Max Controllable Speed** Pitch: 120°/s Pan: 180°/s
Camera	**Name** X3 **Model** FC350 **Total Pixels** 12.76M **Effective Pixels** 12.4M **Image Max Size** 4000x3000 **ISO Range** 100-3200 (video) 100-1600 (photo) **Electronic Shutter Speed** 8s － 1/8000s **FOV (Field Of View)** 94° **CMOS** Sony EXMOR 1/2.3” **Lens** 20mm (35mm format equivalent)f/2.8 focus at ∞ 9 Elements in 9 groups Anti-distortion **Still Photography Modes** Single shoot Burst shooting: 3/5/7 frames Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7EV Bias Time-lapse **Video Recording Modes** UHD (4K): 4096x2160p24/25, 3840x2160p24/25/30 FHD: 1920x1080p24/25/30/48/50/60 HD: 1280x720p24/25/30/48/50/60 **Max Bitrate Of Video Storage** 60 Mbps **Supported File Formats** FAT32/exFAT Photo: JPEG, DNG Video: MP4/MOV (MPEG-4 AVC/H.264) **Supported SD Card Types** Micro SD Max capacity: 64 GB. Class 10 or UHS-1 rating required. **Operating Temperature Range** 0° to 40° C

Remote Controller	**Name** C1 **Operating Frequency** 922.7~927.7 MHz (Japan Only) 5.725~5.825 GHz 2.400~2.483 GHz **Transmitting Distance (Outdoor And Unobstructed)** 2 km **EIRP** 10dBm@900m, 13dBm@5.8G, 20dBm@2.4G **Video Output Port** USB, mini-HDMI **Power Supply** Built-in battery **Charging** DJI charger **Dual User Capability** Host-and-Slave connection **Mobile Device Holder** Tablet or Phone **Max Mobile Device Width** 170mm **Output Power** 9 W **Operating Temperature Range** -10° to 40° C **Storage Temperature Range** Less than 3 months: -20° to 45° C More than 3 months: 22° to 28° C **Charging Temperature Range** 0-40° C **Battery** 6000 mAh LiPo 2S
Charger	**Model** A14-100P1A **Voltage** 26.3 V **Rated** **Power** 100 W
Battery (Standard)	**Name** Intelligent Flight Battery **Model** TB47 **Capacity** 4500 mAh **Voltage** 22.2 V **Battery Type** LiPo 6S High voltage battery **Energy**

	99.9 Wh **Net Weight** 570 g **Operating Temperature Range** -10° to 40° C **Storage Temperature Range** Less than 3 months: -20° to 45° C More than 3 months: 22° C to 28° C **Charging Temperature Range** 0° to 40° C **Max Charging Power** 180 W
Vision Positioning	**Velocity Range** Below 8 m/s (2 m above ground) **Altitude Range** 5-500 cm **Operating Environment** Brightly lit (lux > 15) patterned surfaces **Operating Range** 0-250 cm

DJI F550 FLAMEWHEEL TECHNICAL SPECIFICATIONS

Model	Flame Wheel 550 (F550)
Frame Weight	478g
Diagonal Wheelbase	550mm
Takeoff Weight	1200g ~ 2400g
Recommended Propeller	10 × 3.8in ; 8 × 4.5in
Recommended Battery	3S~4S LiPo
Recommended Motor	22 × 12mm (Stator size)
Recommended ESC	15A OPTO

NAZA-M V2 CONTROL PLATFORM TECHNICAL SPECIFICATIONS

Platform	Multi-rotor
Size	MC: 45.5mm x 32.5mm x 18.5mm PMU: 39.5mm x 27.5mm x 10.0mm GPS & Compass 46mm(diameter)x10mm LED: 25mm x 25mm x 7.0mm

Weight	MC:27g PMU:28g GPS:27g LED:13g
Power Consumption	MAX: 3.15W(0.25A@12.6V) Normal:1.638W(0.13A@12.6V)
Working Voltage	MC：4.8V ~ 5.5V PMU：7.4V ~ 26.0 V (recommend 2S ~ 6S LiPo)
Operating Temperature	-10°C to 50°C
Functions	Max Yaw Angular Velocity 200°/s Max Tilt Angle 35° Ascent 6m/s / Descent 4.5m/s
Packing List	MC x 1 GPS x 1 PMU x 1 USB Cable x 1 LED x 1 Servo Cables x 8 Micro-USB Cable x 1 CAN Cable x 1

EXHIBIT – B

DJI Inspire and DJI F550 Flamewheel Manufacturer's User Manual

http://download.dji-innovations.com/downloads/inspire_1/en/Inspire_1_User_Manual_v1.2_en.pdf

http://download.dji-innovations.com/downloads/flamewheel/en/F550_User_Manual_v1.9_en.pdf

Exhibit – C

DJI Inspire and DJI F550 Flamewheel Maintenance Manual

Maintenance Manual
INSPIRE 1

To ensure that your aircraft continues to offer optimal performance and to ensure flight safety, it is recommended that comprehensive maintenance be performed after every 200 flights or 50 flight hours. This manual is intend to help users maintain their aircraft and maximize its continued reliability.

I. Checking the Battery

1. Check the battery for damage and deformities. If there are any signs of damage to the battery, stop using it and discharge the battery to 10% or below for disposal. Do not disassemble the battery for any reason.

2. Check the battery pins and rub them clean with an eraser if any residue is observed. This will help to ensure a more reliable connection.

3. Check the metal battery power connectors for damage. If the connectors appear burnt, try to clear them. This can be done by inserting a piece of sandpaper (1mm thick) into the connectors to polish the metal.

4. Check the contact pins in the battery compartment to ensure that the pins are clear. They should be able to establish easy contact with the battery connectors and should not be bent.

5. Check the electrodes on the battery. If they appear burnt, polish them with sandpaper. If there is serious erosion, send the battery in for repairs.

6. Check the plastic components of the battery bracket to see it is in good condition and that all screws are secure. This prevents the battery from becoming loose during flight.

7. Check the power cables between the arms and the center plate, if the cables are worn, contact DJI to arrange repairs.

8. For long term storage, please refer to the “Intelligent Flight Battery Safety Guidelines” and check the battery once a month to prevent the battery cell from being damaged.

9. Run the DJI Pilot App to confirm that all battery cells are at similar voltage levels and stay at the same level when the battery is fully charged. If all cells maintain voltage levels above 3.7V but any cell is 0.2V higher or lower than the others, contact DJI for analysis. You can also check the battery cell warning history. If any warning are reported, contact DJI.

II. Checking the Transformation System

1. Check the servomotor cables for wear. Also confirm that the connection points are still in good condition
.
2. Check the lead screws and contact DJI Support to arrange repairs if any bending or damage is discovered. Clean the lead screws with WD-40 spray if they show signs of rust.

3. Listen to the servomotors during the transformation, if there is abnormal noise, it may indicate that the servomotors worn.

4. After the landing gear rises, check the lead screws and bearings. If any dirt or dust is found, clean and

IV. Checking the Motors

1. Check the rotors to confirm that they have not become loose.

2. Detach the propellers and start the motors. Listen carefully. If there is any abnormal noise, please replace the motors. This may be a sign that the bearings have been worn out.

3. Detach the propellers and start the motors. Carefully examine the edge of the rotor and confirm that the shaft is perfectly centered on the motor. Check for any abnormal or excessive vibration. If any problems are detected, contact DJI Support to order replacement motors.

4. Check for deformities by confirming that the gap between the motor and motor base is even. If not contact DJI Support to order replacement motors.

5. Ensure that the screws used to secure the motor base are tight and the plastic components around the motors are in good condition. If not please tighten the screws and contact DJI to repair any broken plastic components.

V. Checking the Propellers

1. Check the propellers. If there is any bending, breakage or cracking on a propeller, do not use it.

2. Attach the propeller to the motor, turn on the aircraft, and place it on the ground. Stand 1 meter away from the aircraft and observe the rotating propellers. If you can see two distinct propeller outline layers, when looking at a spinning propeller from the side, this propeller is damaged and should not be used.

VI. Checking the IMU

1. Open DJI Pilot app to check the condition of the IMU and perform an advanced IMU calibration. Please place the aircraft in a cool environment and on a flat, stable surface (if the landing gear is damaged, support the aircraft with four objects of equal height). Do not touch the craft during the calibration.

2. Turn on the aircraft and listen for any abnormal noise or vibration from the fan located on the front of the aircraft. If any irregularity is detected, replace the fan.

VII. Checking the Control and Video Transmission System

1. Check the 4 antennas on the landing gear to ensure that they are secure. Also check for any bending or damage.

2. Check the antennas of the remote controller for Damage

3. Check the neck strap for damage or wear, replace

grease the bearings.

5. Check the lead screws. If there is any scratches, dents, or plastic particles underneath them, contact DJI Support to arrange repairs.

III. Checking the Aircraft

1. Confirm that all the screws are still adequately tightened.

2. Check the aircraft for breaks or damage. If there is any reason to believe that detectable damage might affect flight safety, consult with DJI Support.

3. Check the carbon tubes of the arms for damage
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4. Check the dampers on the landing gears. If they are loose, secure them with 502 glue.

5. Ensure that there are no obstacles on or around the GPS module or around the antennas on the landing gear. Remove any obstacles (such as tapes with conductive material) that might affect or block the signal

6. Check that the right and left landing gear rest at the same tilt angle.

if necessary.

VIII. Checking the Gimbal and Camera

1. The quick-mount connector for the camera is a particularly vulnerable component. If the gimbal fails to initialize when turned on, fails to work after initialization, or fails to transmit video to the app (while OSD data is displayed), the quick-mount connector may be worn. In this case, replace the rubber mat, circuit board, and/or connector on the gimbal quick-mount.

2. Check the metal contacts on the quick mount connector board, if any contact is bent, replace the quick-mount connector.

3. Check the contact pins on the quick-mount connector board, if there is any dirt, rub it clean with an eraser. If any contact pins are worn out it should be replaced.

4. Confirm that the gimbal is able to properly stabilize itself. If its stabilizing performance deteriorates, contact DJI to arrange repairs.

5. Listen for any abnormal noise from the fan when the gimbal is turned on. This may indicate unusual vibration and the fan should be replaced.

IX. Checking the Vision Positioning System

1. Check the lens of the camera. If any dirt or residue is detected, gently clean the lens.

2. Check for and remove objects that might block the sensors.

3. Ensure that the Vision Positioning System is securely installed on the aircraft.

4. Detach the propellers and turn on the aircraft. Hold the aircraft 1-2 meters above a surface with rich patterns, under good lighting conditions. Change the Flight Mode switch to P Mode on the controller and check the DJI Pilot app. If the app displays an altitude value and indicates that P-OPTI mode is active, the Vision Positioning System should function normally.

Maintenance Manual
DJI F550 Flamewheel

To ensure that your aircraft continues to offer optimal performance and to ensure flight safety, it is recommended that comprehensive maintenance be performed after every 200 flights or 50 flight hours. This manual is intend to help users maintain their aircraft and maximize its continued reliability.

I. Checking the Battery

1. Check the battery for damage and deformities. If there are any signs of damage to the battery, stop using it and discharge the battery to 10% or below for disposal. Do not disassemble the battery for any reason.

2. Check the battery pins and rub them clean with an eraser if any residue is observed. This will help to ensure a more reliable connection.

3. Check the metal battery power connectors for damage. If the connectors appear burnt, try to clear them. This can be done by inserting a piece of sandpaper (1mm thick) into the connectors to polish the metal.

4. Check the contact pins in the battery compartment to ensure that the pins are clear. They should be able to establish easy contact with the battery connectors and should not be bent.

5. Check the electrodes on the battery. If they appear burnt, polish them with sandpaper. If there is serious erosion, send the battery in for repairs.

6. Check the plastic components of the battery bracket to see it is in good condition and that all screws are secure. This prevents the battery from becoming loose during flight.

7. Check the power cables between the arms and the center plate, if the cables are worn, contact DJI to arrange repairs.

8. For long term storage, please refer to the “Intelligent Flight Battery Safety Guidelines” and check the battery once a month to prevent the battery cell from being damaged.

9. Run the DJI Pilot App to confirm that all battery cells are at similar voltage levels and stay at the same level when the battery is fully charged. If all cells maintain voltage levels above 3.7V but any cell is 0.2V higher or lower than the others, contact DJI for analysis. You can also check the battery cell warning history. If any warning are reported, contact DJI.

II. Checking the Transformation System

1. Check the servomotor cables for wear. Also confirm that the connection points are still in good condition.

2. Check the lead screws and contact DJI Support to arrange repairs if any bending or damage is discovered. Clean the lead screws with WD-40 spray if they show signs of rust.

3. Listen to the servomotors during the transformation, if there is abnormal noise, it may indicate that the servomotors worn.

4. After the landing gear rises, check the lead screws and bearings. If any dirt or dust is found, clean and grease the bearings.

5. Check the lead screws. If there is any scratches, dents, or plastic particles underneath them, contact DJI Support to arrange repairs.

III. Checking the Aircraft

1. Confirm that all the screws are still adequately tightened.

2. Check the aircraft for breaks or damage. If there is any reason to believe that detectable damage might affect flight safety, consult with DJI Support.

3. Check the carbon tubes of the arms for damage.

4. Check the dampers on the landing gears. If they are loose, secure them with 502 glue.

5. Ensure that there are no obstacles on or around the GPS module or around the antennas on the landing gear. Remove any obstacles (such as tapes with conductive material) that might affect or block the signal.

6. Check that the right and left landing gear rest at the same tilt angle.

IV. Checking the Motors

1. Check the rotors to confirm that they have not become loose.

2. Detach the propellers and start the motors. Listen carefully. If there is any abnormal noise, please replace the motors. This may be a sign that the bearings have been worn out.

3. Detach the propellers and start the motors. Carefully examine the edge of the rotor and confirm that the shaft is perfectly centered on the motor. Check for any abnormal or excessive vibration. If any problems are detected, contact DJI Support to order replacement motors.

4. Check for deformities by confirming that the gap between the motor and motor base is even. If not contact DJI Support to order replacement motors.

5. Ensure that the screws used to secure the motor base are tight and the plastic components around the motors are in good condition. If not please tighten the screws and contact DJI to repair any broken plastic components.

V. Checking the Propellers

1. Check the propellers. If there is any bending, breakage or cracking on a propeller, do not use it.

2. Attach the propeller to the motor, turn on the aircraft, and place it on the ground. Stand 1 meter away from the aircraft and observe the rotating propellers. If you can see two distinct propeller outline layers, when looking at a spinning propeller from the side, this propeller is damaged and should not be used.

VI. Checking the Control and Video Transmission System

1. Check the antennas of the remote controller for damage

2. Check the neck strap for damage or wear, replace if necessary.

VIII. Checking the Gimbal and Camera

1. If the gimbal fails to initialize when turned on, fails to work after initialization, or fails to transmit video to the app (while OSD data is displayed), replace the circuit board, and/or connector on the gimbal.

2. Check the metal contacts on the connector board, if any contact is bent, replace the quick-mount connector.

3. Check the contact pins on the quick-mount connector board, if there is any dirt, rub it clean with an eraser. If any contact pins are worn out it should be replaced.

4. Confirm that the gimbal is able to properly stabilize itself. If its stabilizing performance deteriorates, contact DJI to arrange repairs.

5. Check the lens of the camera. If any dirt or residue is detected, gently clean the lens.

EXHIBIT – D

Monthly Maintenance Log

DJI F550 / DJI Inspire 1

MONTHLY MAINTENANCE LOG

month:_____(year:_____

UAS#:_____	Date Issue Discovered	Date Issue Addressed	Issue Description & Maintenance Conducted	Maintenance(Performed By: Print & Sign)
Software Updates				
Airframe				
Engines				
Propellers				
Camera Gimbal				
Landing Gear				
Vibration Dampening				
Other:				