



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

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

September 21, 2015

Exemption No. 12929  
Regulatory Docket No. FAA-2015-2642

Mr. John-Paul Clark  
DBA UAV Xpressions  
10322 Lyndon Meadows Drive  
Houston, TX 77095

Dear Mr. Clark:

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 11, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. You requested to operate an unmanned aircraft system (UAS) to conduct aerial inspections, photography, and videography.

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 Phantom 3.

In accordance with the statutory criteria provided in Section 333 of Public Law 112-95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that relief from 14 CFR part 21, *Certification procedures for products and parts*,

*Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

### **The Basis for Our Decision**

You have requested to use a UAS for aerial data collection<sup>1</sup>. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA–2014–0352), 11109 to Clayco, Inc. (*see* Docket No. FAA–2014–0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA–2014–0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA–2014–0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

### **Our Decision**

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Mr. John-Paul Clark 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.

### **Conditions and Limitations**

In this grant of exemption, Mr. John-Paul Clark is hereafter referred to as the operator.

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

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 Phantom 3 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.nts.gov](http://www.nts.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



**John-Paul Clark D.B.A. UAV Xpressions**

10322 Lyndon Meadows Dr.  
Houston, Texas 77095

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June 11<sup>th</sup>, 2015

U.S. Department of Transportation  
Docket Operations, M-30  
1200 New Jersey Avenue, SE, Room W12-140  
West Building Ground Floor  
Washington D.C. 20590-001

RE: **John-Paul Clark D.B.A. UAV Xpressions** request for sUAS airworthiness exemption under Section 333 of the FAA Reform and Re-modernization Act of 2012 and Part II of the Federal Aviation Regulations from 14 C.F.R §§ 43.7, 43.11, 45.11, 45.21, 45.23, 45.25, 45.27, 45.29, 47.3(b)(2), 47.31(c), 61.101(e)(4) and (5), 61.113, 61.315(a), 61.23(a), 91.9(b)(c), 91.103(b)(2), 91.105, 91.109, 91.119(b)(c), 91.203(a)(b), 91.215, 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)

Dear Sir or Madam:

In advance of the small unmanned aircraft system (sUAS) rule, I, **John-Paul Clark D.B.A. UAV Xpressions** hereby apply for an exemption from the listed Federal Aviation Regulations pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 in order to safely operate a sUAS for the purpose of conduction aerial photography and videography in support of real estate, insurance, construction, and commercial development activities. It is my sincere belief that both the public interest as well as public safety may best be served, as documented in the supporting material herein, by the granting of this petition.

If I may be able to assist in any way, please feel free to contact me at 281-414-4848 or via email at JPclark@uavXpressions.com

Sincerely,

John-Paul Clark

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## **SUMMARY**

John-Paul Clark D.B.A. UAV Xpressions (hereafter John-Paul Clark) seeks exemption from the requirements of 14 C.F.R §§ 43.7, 43.11, 45.11, 45.21, 45.23, 45.25, 45.27, 45.29, 47.3(b)(2), 47.31(c), 61.101(e)(4) and (5), 61.113, 61.315(a), 61.23(a), 91.9(b)(c), 91.103(b)(2), 91.105, 91.109, 91.119(b)(c), 91.203(a)(b), 91.215, 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), to operate an Unmanned Aircraft System pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). This exemption will permit John-Paul Clark to operate an Unmanned Aircraft System (UAS) for the commercial purpose of conducting aerial photography and videography in support of real estate, insurance, construction, and commercial development activities.

## **INTRODUCTION AND INTERESTS OF THE PETITIONER**

John-Paul Clark has had experience in both amateur and professional photography since 1984, has had experience supporting the real estate industry in marketing homes through web-based media since 1996 and has logged several hundred hours as a UAV hobbyist. The objective of John-Paul Clark and his aerial operations is to provide high quality imaging for a variety of commercial, public, and residential uses, specifically targeting:

- Real estate marketing
- Insurance appraisals
- Building & construction inspections
- Marketing
- Construction sites before and after
- Appraisals
- Motion Picture Filming
- Aerial acquisitions for inspections of public and private structures.
- Building Inspection operations

## **AIRCRAFT OVERVIEW: DJI Inspire 1 and DJI Phantom 3**

John-Paul Clark seeks an exemption to operate DJI Inspire 1 and DJI Phantom 3 UAS systems for compensation or hire within the NAS. The DJI Inspire 1 and Phantom 3 are vertical takeoff and landing (VTOL) Unmanned Aircraft (UA) with a Ground Control Station (GCS) utilizing electronic tablet or smart phone systems.

The DJI Inspire 1 has a maximum gross weight of approximately 7 pounds, with a length of 17 inches and a width of 18 inches and a height of 10 inches and a maximum speed of approximately 30 knots.

DJI Phantom 3 has a maximum gross weight of 6 pounds 7.5 ounces, a length of 17.3 inches, width of 17.7 inches, height of 11.8 inches, and a maximum speed of approximately 30 knots.

The DJI Inspire 1 and Phantom 3 are equipped with four main rotors; driven by Lithium Polymer battery powered electric motors.

## **BASIS FOR PETITION**

Petitioner, John-Paul Clark, 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 UAS Aircraft in the National Airspace System (NAS), and for an exemption from the requirements of 14 C.F.R §§ 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).

In consideration of the speed, weight, size, and limited operating area associated with the unmanned aircraft and its operation, John-Paul Clark's DJI UAS Aircraft 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, John-Paul Clark 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.

John-Paul Clark submits that the requested relief is proper since an equivalent level of safety will be ensured. John-Paul Clark 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.

Additionally, John-Paul Clark requests relief from the requirements of Sections 45.11, 45.21, 45.23, 45.25, 45.27, 45.29, 47.3(b)(2), and 47.31(c) since the FAA currently has no registration procedure for sUASs; and should such a procedure exist, the small size and flight characteristics of the UAS prohibit the placement of placards and markings per the specified dimensions.

Relief from certain requirements of Section 61.101(e)(4) and (5) entitled *Recreational pilot privileges and limitations: Pilot in command*, and from Section 61.315(a) entitled *What are the privileges and limits of my sport pilot certificate*, and from Section 61.23(a) entitled *Medical certificates: Requirements and duration*, is requested by John-Paul Clark to the extent necessary to allow a Pilot in Command (PIC) holding a sport pilot or higher level certificate, as well as a valid driver's license, and who has demonstrated, by meeting minimum flight-hour and currency requirements, that the PIC is able to safely operate the DJI UAS Aircraft in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

John-Paul Clark seeks relief from Section 91.7(a), entitled *Civil aircraft airworthiness*, because the DJI UAS Aircraft do not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. As such, John-Paul Clark submits that he will ensure the DJI UAS Aircraft are in an

airworthy condition, prior to every flight, by determining that the UASs are in compliance with the operating documents and that the aircraft are in a condition for safe flight.

John-Paul Clark also seeks an exemption from the requirements of Section 91.121, entitled *Altimeter Settings*, DJI UAS aircraft will not have a typical barometric altimeter onboard. However, altitude information of the DJI UAS Aircraft 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 John-Paul Clark operation of the DJI UAS Aircraft within visual line of sight, at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121.

Additionally, John-Paul Clark seeks an exemption from the requirements of Section 91.151(b), entitled *Fuel requirements for flight in VFR conditions*. John-Paul Clark submits that safety will not be affected by operation of the DJI UAS Aircraft 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 15 minutes to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 5 minutes.

In accordance with 14 C.F.R. § 11.81, John-Paul Clark provides the following information in support of its petition for exemption:

#### **Name And Address Of The Petitioner.**

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

John-Paul Clark D.B.A. UAV Xpressions  
10322 Lyndon Meadows Dr.  
Houston, Texas 77095  
281-414-4848  
JPclark@UAVxpressions.com

#### **SECTIONS OF 14 C.F.R. FROM WHICH JOHN-PAUL CLARK SEEKS EXEMPTION**

- Section 43.7
- Section 43.11
- Section 45.11
- Section 45.21
- Section 45.23
- Section 45.25
- Section 45.27
- Section 45.29
- Section 47.3(b)(2)
- Section 47.31(c)

- Section 61.101(e)(4) and (5)
- Section 61.113(a) And (b)
- Section 61.23(a)
- Section 61.315(a)
- Section 91.7(a)
- Section 91.121
- Section 91.151(b)
- Section 91.405(a)
- Section 91.407(a)(1)
- Sections 91.409(a)(1) and 91.409(a)(2).
- Sections 91.417(a) and 91.417(b).

## **SPECIAL EXEMPTION REQUESTS**

### **Section 43.7**

Relief from section 43.7 is requested. Given the sUAS construction characteristics, all inspections will be done as recommended by the manufacturer. All repairs other than simple propeller changes will be done by the manufacturer or one of their authorized repair centers. Maintenance will be performed as outlined in the manufacturer's maintenance guidelines. All maintenance and repairs will meet the requirements for the equivalent level of safety pursuant to section 33 given the intended use and remote location of the sUAS.

### **Section 43.11**

Relief from section 43.11 is requested. Currently the FAA has not certified any inspections for sUASs. Furthermore, due to the size of the sUAS, no room exists for maintenance placards. Maintenance records will be kept on file by John-Paul Clark.

### **Section 45.11**

Relief from section 45.11 entitled *Marking of products* is requested. Due to its small size and flight characteristics, fireproof placards would cause a potential hazard to the aircraft with the additional weight or location.

### **Section 45.21**

Relief from section CFR 45.21 entitled *General* is requested. The FAA currently has no registration procedures for sUASs however if a registration number can be assigned, placement on the aircraft will be done in the most practical and visible means available.

**Section 45.23**

Relief from section 45.23 entitled *Display of marks* is requested. Due to the small size of the sUAS, full size aircraft marks are not feasible. If a designation is assigned by the FAA, John-Paul Clark will place assigned designation marks on the aircraft in the most practical and visible manner available.

**Section 45.25**

Relief from section 45.25 entitled *Location of marks on fixed wing aircraft* is requested. The sUAS is a multi-rotor aircraft and does not possess fix wings and as such 14 CFR 45.25 is inapplicable.

**Section 45.27**

Relief from section 45.27 entitled *Location of marks on non-fixed wing aircraft* is requested. Due to the sUASs small size it has no cabin, fuselage, boom, or tail.

**Section 45.29**

Relief from section 45.29 entitled *Size of Marks* is requested. Due to size constraints of the aircraft, this requirement cannot be met.

**Section 47.3(b)(2)**

Relief from section 47.3(b)(2) entitled *Registration* is requested since the FAA currently has no procedures for registration of a sUAS.

**Section 47.31(c)**

Relief from section 47.31(c) entitled *Application* is requested since compliance for 14 CFR 47.31(c) is not possible since the FAA does not yet have procedures to register sUAS.

**Section 61.113(a) And (b)**

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 sport pilot or higher level certificate, as well as a current and valid airman medical certificate or a valid Texas drivers license, 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, John-Paul Clark submits that an equivalent level of safety will be maintained because no PIC will be allowed to operate the DJI Inspire 1 or DJI Phantom 3 UAS unless that PIC has met certain flight-hour and currency requirements, demonstrating that the PIC is able to safely operate either the DJI Inspire 1 or DJI Phantom 3 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, John-Paul Clark submits that all flights of DJI UAS aircraft, conducted by the PIC pursuant to the grant of this Petition: (1) will be incidental to John-Paul Clark business; and (2) will not carry passengers or property for compensation or hire.

### **Section 61.23(a)**

Relief from Section 61.23(a), entitled *Operations* requiring a medical certificate: Requirements and duration, is requested to the extent required to necessary to allow a PIC holding a sport pilot certificate or higher level certificate, as well as a current and valid driver's license, to conduct the proposed UAS flight operations for compensation or hire.

This relief is requested since the limitations set forth in Section 61.23(a) otherwise require the PIC of any flight for compensation or hire to hold a comprehensive FAA issued medical certificate.

### **Section 61.315(a)**

Relief from Section 61.315(a) entitled *What are the privileges and limits of my sport pilot certificate*, is requested to the extent necessary to allow a PIC holding a sport pilot or higher level certificate to conduct the proposed UAS flight operations for compensation or hire.

This relief is requested since the limitations set forth in Section 61.315(a) restrict a sport pilot from acting as the PIC of any flight for compensation or hire, or for the furtherance of any business.

Additionally, similar to the private and commercial pilot certificates, holders of recreational and sport pilot certificates are subject to security screening by the Department of Homeland Security (DHS).

Therefore, because they must demonstrate aeronautical knowledge relevant to UAS operations and are subject to DHS screening, factors that were considered by the FAA in allowing private pilot operations under previous exemptions, the FAA now determines that holders of recreational and sport pilot certificates may serve as the PIC for UAS operations.



### **Section 91.7(a)**

Relief from Section 91.7(a) entitled *Civil aircraft airworthiness*, is requested to the extent required to allow John-Paul Clark to determine that the DJI UAS Aircraft are in airworthy condition prior to every flight by ensuring that the UAS is in compliance with the operating documents (i.e., the Monthly Maintenance Log, and DJI UAS Aircraft instruction manuals).

John-Paul Clark seeks the requested relief because the DJI UAS Aircraft do not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Therefore, John-Paul Clark will ensure that the DJI UAS Aircraft are in airworthy condition based upon its compliance with the operating documents (i.e., Monthly Maintenance Log, and DJI UAS Aircraft instruction manuals) prior to every flight, and further, determine that the aircraft are in condition for safe flight, as stated in the conditions and limitations below.

### **Section 91.121**

Relief from Section 91.121, entitled *Altimeter settings*, may be required to allow flight operations of the DJI UAS Aircraft, which utilize a barometric pressure sensor, GPS equipment, and a radio communications telemetry data link to downlink altitude information from the UA to the PIC at the ground control station (GCS). Since the FAA requires that any altitude information concerning UAS operations be reported to air traffic control (ATC) in feet above ground level (AGL), John-Paul Clark seeks the requested relief because the DJI UAS Aircraft 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 91.121 is sought to the extent necessary to comply with the applicable conditions and limitations stated below. As more fully set forth herein, an equivalent level of safety will be maintained since the DJI UAS Aircraft are equipped with a barometric pressure sensor and GPS equipment, which automatically ensures that a ground level pressure setting will be established prior to each flight, and provides the PIC with altitude information of the UA on the heads-up display of the GCS.

### **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 UAS Aircraft 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. John-Paul Clark seeks the requested relief because without an exemption from Section 91.151(b), the flight time duration of the battery powered DJI UAS Aircraft will severely constrain the practicality of any aerial video or still photo flight operations that John-Paul Clark proposes to conduct pursuant to this Petition.

Significantly, as set forth below, the technical specifications of the DJI UAS Aircraft operating documents, and John-Paul Clark proposed operating limitations, ensure that John-Paul Clark will safely operate the battery powered DJI UAS Aircraft during daylight hours in visual meteorological conditions (VMC), under visual flight rules (VFR), 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.

### **Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), And 91.417(a) & (b)**

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, John-Paul Clark requests relief from these Sections because the DJI UAS Aircraft do not require airworthiness certificates. As set forth more fully below, DJI UAS Aircraft meet the conditions of FMRA Section 333 for operation without an airworthiness certificate.

Accordingly, John-Paul Clark 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 Monthly Maintenance Log and DJI UAS Aircraft Instruction Manual). Furthermore, John-Paul Clark will document and maintain all maintenance records for the DJI UAS Aircraft.

### **THE GREATER PUBLIC INTEREST**

Granting the present Petition will further the public interest by allowing John-Paul Clark to safely, efficiently, and economically perform aerial photography and videography of real estate, construction sites, and landscape over certain areas of the United States.

Additionally, use of the DJI UAS Aircraft will decrease congestion of the NAS, reduce pollution, and provide significant benefits to the economy. Notably, the benefits of John-Paul Clark proposed operation of the DJI UAS Aircraft will be realized without implicating any privacy issues.

### **PRIVACY**

Similar to the manned aerial acquisition flight operations that have been conducted for decades, John-Paul Clark proposed operation of the DJI UAS Aircraft will not implicate any privacy issues. Specifically, the DJI UAS Aircraft will be operated only in compliance with operating documents (i.e., Monthly Maintenance Log, and DJI UAS Aircraft Instruction Manual) which requires property owner involvement as well as local law enforcement notification, and in accordance with the Federal Aviation Regulations, including the minimum altitude requirements of 14 C.F.R. § 91.119.

## **SAFETY**

In seeking this exemption, John-Paul Clark submits that the DJI UAS Aircraft can operate safely in the NAS pursuant to FMRA Section 333, as demonstrated by:

- a) the characteristics of the DJI UAS aircraft;
- b) the pilot certification requirement; and
- c) the specific operating limitations.

### **The DJI UAS Aircraft Specifications & Characteristics**

The DJI UAS Aircraft do 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.

- The technical specifications of the DJI UAS Aircraft are set forth by the DJI UAS aircraft User Manuals, attached hereto as Appendix A and B.
- The DJI UAS Aircraft Autonomous Flight and Navigation Modes Enable The UASs to Remain Within a Defined Operational Area.
- The DJI UAS Aircraft may be operated in both manual and fully autonomous flight modes. A complete description of the flight and navigational modes of the DJI UAS Aircraft provided in the User Manuals, attached hereto as Appendix A and B.
- The DJI UAS Aircraft 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 UAS Aircraft will remain stationary, in flight, for 3 seconds or more. If, after 3 seconds, the DJI UAS Aircraft do not reacquire control link data from the GCS, the UAs will assume that the Control Link is lost and the UAs 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 UAS aircraft are described in the User Manuals, attached hereto as Appendix A and B.

### **Specific Operating Limitations**

In seeking this exemption, John-Paul Clark proposes to commercially operate DJI UAS Aircraft for the special purpose of conducting aerial photography and videography over certain areas of United States, pursuant to the following specific operating limitations:

1. UAS operations under this exemption will be limited to conducting operations for the purpose of aerial photography and videography.
2. The UA may not be flown at an indicated airspeed exceeding 45 knots.
3. 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.

4. 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, as specified on the PIC's FAA-issued airman medical certificate.
5. As a safety observer (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. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. The operator must follow the UAS manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.
12. 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.

13. Each UASs operated under this exemption must comply with all manufacturer Safety Bulletins.
14. The authorized person must make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections. 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.
15. UAS operations may not be conducted during night, as defined in 14 C.F.R.
16. § 1.1. All operations must be conducted under visual meteorological conditions (VMC). If flight at night is required, a special request will be made at the FAA office closest to proposed area of operations. Flights under special visual flight rules (SVFR) are not authorized.
17. The UAV 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.
18. The UAV may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.
19. If the UAV loses communications or loses its GPS signal, it must return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operating documents.
20. The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.
21. 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 UAV with 20% battery power remaining.
22. Before conducting operations, the radio frequency spectrum used for operation and control of the UAV must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.
23. The documents required fewer than 14 C.F.R. 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the UAS is operating. These

documents must be made available to the Administrator or any law enforcement official upon request.

24. The UAV must remain clear and yield the right of way to all manned aviation operations and activities at all times.
25. The UAV 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:
27. Barriers or structures are present that sufficiently protect nonparticipating persons from the UAV and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately and/or;
32. 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;
28. Operations nearer to the PIC, SO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).
29. 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.
30. 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.
31. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: [www.nts.gov](http://www.nts.gov).

## CONCLUSION

As set forth herein, John-Paul Clark 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 UAS Aircraft 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 John-Paul Clark to safely, efficiently, and economically operate the DJI UAS Aircraft commercially within the NAS.

WHEREFORE, in accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, John-Paul Clark respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections 43.7, 43.11, 45.11, 45.21, 45.23, 45.25, 45.27, 45.29, 47.3(b)(2), 47.31(c), 61.101(e)(4) and (5),

61.113, 61.315(a), 61.23(a), 91.9(b)(c), 91.103(b)(2), 91.105, 91.109, 91.119(b)(c), 91.203(a)(b), 91.215, 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 John-Paul Clark to operate the DJI UAS Aircraft commercially for the purpose of conducting aerial photography and videography over certain areas of the United States.

Dated: June 11<sup>th</sup>, 2015

Respectfully,

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**APPENDIX A** - Inspire 1 User Manual (EN) v1.2

[http://download.dji-innovations.com/downloads/inspire\\_1/en/Inspire\\_1\\_User\\_Manual\\_v1.2\\_en.pdf](http://download.dji-innovations.com/downloads/inspire_1/en/Inspire_1_User_Manual_v1.2_en.pdf)

**APPENDIX B** - Phantom 3 Professional User Manual (EN) v1.2

[http://download.dji-innovations.com/downloads/phantom\\_3/en/Phantom\\_3\\_Professional\\_User\\_Manual\\_v1.2\\_en.pdf](http://download.dji-innovations.com/downloads/phantom_3/en/Phantom_3_Professional_User_Manual_v1.2_en.pdf)