



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

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

June 15, 2015

Exemption No. 11831
Regulatory Docket No. FAA-2015-1022

Mr. Mark Underkofler
President
Charles Franklin, Inc.
8424 Bernard Road
Sanger, TX 76266

Dear Mr. Underkofler:

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

By letter dated April 6, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Charles Franklin, Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct closed-set filming for the motion picture and television industries.

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

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

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Inspire 1.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112-95 in reference to 49 U.S.C. § 44704, and in

consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection¹ and closed set motion picture and filming. 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 Astraerus 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, Charles Franklin, Inc. is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection and closed set motion picture and filming. 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, Charles Franklin, Inc. is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Inspire 1 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.
2. Operations for the purpose of closed-set motion picture and television filming are 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.

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 June 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Enclosures

April 6, 2015

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave S.E.
Washington, D.C. 20590

Re: Request for Exemption under Section 333 of the FAA Modernization and Reform Act of 2012 and Part 11 of the Federal Aviation Regulations from Certain Provisions of 14 C.F.R.

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and 14 C.F.R. Part 11, Charles Franklin, Inc. files this petition for exemption on behalf of Charles Franklin, Inc. a Texas Corporation, dba/ Wild Horses A Film Company ("Wild Horses"), an operator of Small Unmanned Aircraft ("UA") used for closed-set filming for the motion picture and television industries. Specifically, applicant seeks an exemption from the Federal Aviation Regulations ("FARs") listed in Appendices A and B to allow commercial operation of its UA, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA in a grant of this petition.

Approval of the exemption for petitioner will allow commercial operation of the DJI Inspire 1, for scripted closed-set filming for the motion picture and television industries in Class G airspace nationwide, or as otherwise prescribed in an Air Traffic Organization ("ATO") issued COA. The UA operations contemplated by this petition are in the public interest because they clearly satisfy the "Four D's" of exemplary uses of UAs: to replace work that is dangerous, difficult, and at the same time provide an equivalent or greater level of safety than alternative manned aircraft operations. The UA covered by this petition is a small battery-powered craft, weighing approximately 15 lbs. (7 kg.), inclusive of battery and payload. Operation of the UA under the strict conditions proposed below will provide an equivalent level of safety, as Congress intended, while still allowing commercial operations. Operations using this UA are far safer than conventional operations conducted with helicopters and fixed-wing aircraft that weigh thousands of pounds, carry highly flammable fuel, and operate in close proximity to the ground, trees, infrastructure, and people.

Congress directed the FAA to consider seven factors in deciding whether to approve Section 333 exemption petitions - size, weight, speed, operational capability, proximity to

airports, proximity to populated areas, and operation within visual line of sight. In this case, each factor supports the exemption request. In particular, the UA is small, and will operate at slow speeds and close to the ground. It will be able to more safely and efficiently film over closed sets and inspect construction sites. The substantial increase of safety and decrease of risk to human life and to property weighs heavily in favor of granting the exemption.

Pursuant to 14 C.F.R. §11.35, petitioner requests confidential treatment for certain information provided with this request for exemption. Specifically, petitioner is submitting its proprietary description of the DJI Inspire 1 and inspection procedures under separate cover as Exhibits 1-2. It requests that the information contained in those exhibits not be made public because they are trade secrets whose disclosure would harm petitioner. They contain valuable commercial data this is not publically available and are protected from release under the Freedom of Information Act, 5 U.S.C. §552(b)(4).

For your ease in reviewing this petition, please refer to the table of contents which begins on page 3. If we can provide any additional information to assist your understanding or review of this document, please do not hesitate to contact us at 214-526-6700 or via email at mark@wildhorsesfilm.com.

Mark Underkofler
President
Charles Franklin, Inc. dba/Wild Horses A Film Company
8424 Bernard Rd.
Sanger, Texas 76266

214-526-6700

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Exhibit List

Exhibit 1: DJI Inspire 1 User Manual.....Submitted separately due to upload constraints

Exhibit 2: Charles Franklin, Inc. Inspection Procedures and Logging Procedure.....Submitted
confidentially to the FAA

Exhibits 1-2 have been submitted confidentially and are not available to the public.

I. Publishable Summary

Pursuant to 14 C.F.R. § 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

Applicant seeks an exemption from the following rules:

14 C.F.R. 21(h); 14 C.F.R. 43.7; 14 C.F.R. 43.11; 14 C.F.R. 45.11; 14 C.F.R. 45.27; 14 C.F.R. 45.29; 14 C.F.R. 61.113; 14 C.F.R. 91.7(a); 14 C.F.R. 91.9(b)(2); 14 C.F.R. 91.9(c); 14 C.F.R. 91.103(b)(2); 14 C.F.R. 91.105; 14 C.F.R. 91.113(b); 14 C.F.R. 91.119(c); 14 C.F.R. 91.121; 14 C.F.R. 91.151(a); 14 C.F.R. 91.203(a) and (b); 14 C.F.R. 215; 14 C.F.R. 91.403; 14 C.F.R. 91.405(a); 14 C.F.R. 91.407(a)(1); 14 C.F.R. 409(a)(1) and (a)(2); and 14 C.F.R. 91.417(a) and (b) to operate commercially a small unmanned aircraft system (UA) (18 lbs. or less).

Approval of the exemption for petitioner will allow commercial operation of the Wild Horses 960, a propriety design, for scripted closed-set filming for (1) the motion picture and television industries and (2) the construction industry nationwide in Class G airspace nationwide, or as otherwise prescribed in an ATO issued COA. The requested exemption should be granted because operation of small UA, weighing approximately 18 lbs. (8 kg.), inclusive of battery and payload, conducted in the strict conditions outlined below, will provide an equivalent level of safety, while still allowing commercial operations. The lightweight aircraft covered by the exemption are far safer than conventional operations conducted with helicopters and fixed-wing aircraft weighing thousands of pounds and carrying highly flammable fuel, and operating in close proximity to the ground, power lines, transmission towers, pipelines, and people. The seven factors Congress directed the FAA to consider when approving Section 333 exemption petitions - size, weight, speed, operational capability, proximity to airports, proximity to populated areas, and operation within visual line of sight – each support the request. In particular, the aircraft are small, and will operate at slow speeds, and close to the ground in order to more safely and efficiently conduct inspections that would otherwise involve a risk of death to the inspectors. The substantial increase of safety and decrease of risk to human life, coupled with the low risk use of UAs to conduct these operations, weigh heavily in favor of granting the exemption.

II. Petitioner's Contact Information

Mark Underkofler
Charles Franklin, Inc dba/Wild Horses A Film Company
8424 Bernard Rd.
Sanger, Texas 76266

mark@wildhorsesfilm.com
214-526-6700

III. Proposed Operations

A. The UA

The requested exemption will permit petitioner to operate the DJI Inspire 1, a commercially produced design, with a maximum weight of approximately 15 lbs. (7 kg.), inclusive of batteries and technical payload. This rotorcraft operates at a speed of no more than 35 knots and has the capability to hover and move in the vertical and horizontal planes simultaneously.

The UA will use the following:

- GPS/Autopilot System: DJI Inspire 1, with its accompanying Main Controller (MC), Internal Measurement Unit (IMU), and GPS.
- DJI Inspire 1 software, which displays power voltage, flight velocity, height, distance from the home point, horizontal attitude and GPS satellite number acquired to make the location calculation.
- Transmitter 1 (Tx1): DJI Inspire 1, used by the UA operator to control the UA

Please refer to Exhibits 1-2 for further information regarding the UA. Details regarding the design and assembly of the UA are being submitted confidentially, due to the proprietary nature of the UA. The petition and the supporting documentation in the Exhibits are hereinafter referred to as the “operating documents.”

The specific conditions of the proposed exemption that relate to the characteristics of the UA are numbers 1, 5, and 16-20 in Section V below. Each has been adopted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

B. The Crew

The crew will consist of a pilot in command (PIC), a visual observer (VO), and a camera operator (CO).

The PIC, VO, and CO will have been trained in operation of UAs generally. The PIC is a lifelong model aircraft hobbyist, with years of general UA experience. Additionally, the PIC will have completed, at a minimum, 40 hours of UA flight training with this specific UA prior to operations, and will be required to participate in annual training thereafter.

The specific conditions of the proposed exemption that relate to the training and characteristics of the crew are numbers 3 and 6-9 in Section V below. Each has been adopted or

imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

C. Flight Conditions

The UA will be used for scripted closed-set filming for the motion picture and television industries and the construction industry. It will be flown in Class G airspace nationwide under 200 feet above ground level (“AGL”) and under controlled conditions over property that is restricted as stated below under D. Flight Operations. Petitioner will work with the local FSDO when planning operations. Petitioner will only operate its UA in visual meteorological conditions (VMC). The UA will at all times be no less than 500 feet below and no less than 2,000 feet horizontally from a cloud, and petitioner will not conduct operations unless visibility is at least 3 statute miles from the PIC. The flight crew will always make a safety assessment of the risk of every operation, and will only operate when it is determined that no hazards are present.

The specific conditions of the proposed exemption that relate to the flight conditions in which the UA will be operated are numbers 2, 4, 16, and 28-29 in Section V below. Each has been adopted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

D. Flight Operations

The purpose of every UA flight will be to conduct safe, accurate, and efficient (i) closed-set filming for the motion picture and television industries or (ii) site inspections for the construction industry in Class G airspace nationwide.

The PIC will be responsible for flying the UA and will use a DJI Inspire 1 transmitter. The PIC will have visual contact with the UA at all times and will have available on screen display to observe telemetry data, including battery power and flight altitude. The on screen display/telemetry information will also be available on an iPad. The main purpose of the iPad with the telemetry information is to set an audio signal for when the voltage on the battery is running low.

The VO will be responsible for the overall safety of the operation. The VO will observe the UA and flight operational area without any display monitors.

The CO may alternatively use a second DJI Inspire 1 transmitter to control the gimbal and the camera. The CO will use an on screen display monitor to observe the camera data and change what is being viewed.

Prior to the day of an operation, the flight crew will conduct a site inspection. The flight crew will look for obstructions in the filming or construction area, and determine a safe flight plan. The flight crew will also make a note of any public access points in the general area, where nonparticipating individuals could access the operational area. The flight crew will adapt their flight plan to avoid these areas.

On the day of an operation, the flight crew will cone off the flight operational area (if not already roped off), up to ½ square miles. The only individuals allowed within the flight operational area will be participants – actors, crew members, or maintenance workers. All other

non-participating individuals and vehicles will be outside the sectioned-off area. Prior to each operation, the flight crew will conduct a safety briefing with all individuals who will be in the flight operational area.

The flight crew will set a “home area” that the UA will launch from and return to. The area will have a ten-foot radius and be marked off with traffic cones. The flight crew will stand outside this area. During operations, the flight crew will wear high visibility safety vests and helmets. The three members of the flight crew will stand next to each other and be able to communicate orally.

The flight crew will conduct a pre- and post-flight inspection, as laid out in Wild Horses’s Inspection Procedures, Exhibit 2. The flight crew will also conduct an inspection flight each week, going through both the pre- and post-flight procedures to ensure that the DJI Inspire 1 is in a safe condition.

In the unlikely event of emergency or a lost link, the UA will be equipped with an emergency “return to home” feature as part of the DJI Inspire 1 flight control. If there is a lost link, the DJI Inspire 1 will be programmed to rise 65.6 feet (20 meters) instantaneously (not to exceed a maximum altitude of 200 AGL), travel horizontally to the home area, and land. For more information regarding the emergency fail safe methods, please refer to the DJI Inspire 1 User Manual (Exhibit 1) to this petition. The failsafe section begins on page 17 of that document.

Flights will be terminated at 20% of battery life. Currently, the DJI Inspire 1’s battery is limited to approximately 15 minutes of flight time. Wild Horses will use an iPad to monitor telemetry data, including battery life. The iPad will send an audio signal when the battery depletes to 20% of remaining power.

The specific conditions of the proposed exemption that relate to flight operations are numbers 11-12, 17-25, and 32-35 in Section V below. Each has been accepted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

IV. Aircraft and Equivalent Level of Safety

Petitioner proposes that the exemption apply to UAs that have the characteristics and that operate with the limitations proposed herein. These limitations provide for a level of safety at least equivalent to or higher than manned aircraft operations under the current regulatory structure. Section V below identifies the limitations and conditions to which petitioner agrees to be bound when conducting commercial operations under a grant of this petition. Appendix A contains a matrix connecting: (i) the specific proposed condition with (ii) the FAR provision for which it provides an equivalent level of safety and (iii) one or more recent Section 333 exemption grants in which the FAA recognized this equivalent level of safety. Appendix B requests relief from additional FARs that are not identified in Appendix A.

Approval of the commercial operations outlined in this petition presents no national security issue. The PIC is willing to undergo a background check, including the proposed Transportation Security Administration Vetting process, to ensure that no national security threat is present. Operation and Certification of Small Unmanned Aircraft, 80 Fed. Reg. 9543 at 9572 (proposed Feb. 23, 2015 (to be codified at 14 C.F.R. Parts 21, 43, 45, et al.)).

V. Proposed Conditions of the Exemption

1. The UA will weigh approximately 15lbs. (7 kg.), inclusive of battery and technical payload.
2. UA operations under this exemption will be limited to conducting operations for the purpose of closed-set filming for the motion picture and television in Class G airspace nationwide.
3. Flights will be operated within line of sight of a pilot and visual observer.
4. Flights will be operated at an altitude of no more than 200 feet AGL, as indicated by the procedures specified in the operating documents. All altitudes reported to ATC must be in feet AGL.
5. The UA will not be flown at an indicated airspeed exceeding 35 knots.
6. Minimum flight crew for each operation will consist of the UA pilot in command (PIC), a visual observer (VO), and a camera operator (CO).
7. The PIC will have, at minimum, 40 hours of training on the UA to be operated under this grant before accepting commercial operations.
8. The petitioner will not permit any PIC to operate unless the PIC meets its qualification criteria and demonstrates the ability to safely operate the UA in a manner consistent with how the UA 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 will be logged in a manner consistent with 14 CFR § 61.51(b). A record of the PIC training will be documented and made available upon request by the Administrator. Training operations will only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations will be considered nonparticipants, and the PIC will operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.
9. The VO will not perform any other duties beyond assisting the PIC with seeing and avoiding other air traffic and other ground based obstacles/obstructions, and will not be permitted to operate the camera or other instruments.
10. The PIC will be designated before the flight and will not be allowed to transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions prescribed in these conditions and the operating documents.
11. A briefing will be conducted in regard to the planned UA operations prior to each day's activities. It will be mandatory that all personnel who will be performing duties in connection with the operations be present for this briefing.
12. Prior to each flight, the PIC will inspect the UA, including the Ground Control Station, to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the

safe operation of the UA, the PIC will not operate the UA until the necessary maintenance has been performed and the UA is found to be in a condition for safe flight. All maintenance and alterations will be properly documented in the aircraft records.

13. Petitioner will conduct a functional flight test on any UA that has undergone maintenance or alterations that affect the UA operation or flight characteristics, e.g. replacement of a flight critical component. The PIC who conducts the functional test flight will make an entry in the aircraft records.
14. The petitioner will carry out its maintenance, inspections, and record keeping requirements, at the direction and under the supervision of the UA manufacturer. Maintenance, inspection, alterations, and status of replacement/overhaul component parts will be noted in the aircraft records, including total time in service, description of work accomplished, and the signature of the manufacturer, authorizing the return of the UA to service. The manufacturer will make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.
15. When conducting operations for the motion picture and television industry, petitioner will submit a written Plan of Activities, and any additional necessary paperwork, to the FSDO at least one day before the proposed operations begin.
16. The UA will be operated within visual line of sight (VLOS) of the PIC and VO at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses. PIC and VO will at all times be able to communicate verbally. They will not be permitted to use electronic messaging or texting to communicate during flight operations.
17. The PIC will not begin 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 20% battery power remaining.
18. Actual total flight time for each operational flight will result in no less than a 20% battery reserve.
19. The UA will have the capability to abort a flight in case of unexpected obstacles or emergencies.
20. The UA will be programmed so that if it loses communication with the ground station or loses its GPS signal, it will return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operating documents
21. If the UA and its radio control link disconnect during flight, the system's failsafe protection will be triggered and the multi-rotor will return to home and land automatically, rather than flying off uncontrollably or landing at an unknown location.
22. The operating documents required under 14 CFR §§ 91.9 and 91.203 will be maintained and available to the PIC at the Ground Control Station of the UA any time the UA is operating. These documents will be made available to the Administrator or any law enforcement official

upon request. If a discrepancy exists between the conditions and limitations in the exemption grant and the procedures outlined in the operating documents, the grant conditions and limitations will take precedence and will be followed. Otherwise, the petitioner will follow the procedures outlined in its operating documents. If it updates or revises its operating documents, it will present updated and revised documents to the Administrator upon request. If the petitioner determines that any update or revision would affect the basis upon which the FAA granted the exemption, then the Petitioner will petition for an amendment to the grant of exemption.

23. Petitioner will obtain written and/or oral permission from the landowners/authorized agents of the landowners over which flights will be conducted.
24. Petitioner will obtain all required permissions and permits from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.
25. UA operations will not be conducted during night, as defined in 14 CFR § 1.1. All operations will be conducted under visual meteorological conditions (VMC). Flights will not be conducted under special visual flight rules (SVFR).
26. The petitioner will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under the grant of exemption. Petitioner will request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation. All operations will be conducted in accordance with airspace requirements in the ATO issued COA, including class of airspace, altitude level and potential transponder requirements.
27. The UA will not be operated 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 has been obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. Any letter of agreement with the airport management will be made available to the Administrator upon request.
28. The UA will not be operated less than 500 feet below, or less than 2,000 feet horizontally from, a cloud or when visibility is less than 3 statute miles from the PIC.
29. All operations shall be conducted in Class G airspace or as otherwise prescribed in an ATO issued COA.
30. All aircraft operated in accordance with this exemption will 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 will be as large as practicable.
31. Before conducting operations, petitioner will ensure that the radio frequency spectrum used for operation and control of the UA complies with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.
32. The UA will remain clear and yield the right of way to all manned aviation operations and

activities at all times.

33. The UA will not be operated by the PIC from any moving device or vehicle.
34. The UA will not be operated over congested or densely populated areas.
35. Petitioner will conduct all flight operations at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless one of the following three conditions is met:
 - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The petitioner will 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, the PIC will ensure that flight operations cease immediately.
 - 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.
 - c. Operations nearer to the PIC, VO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).
36. Petitioner will report any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA to the FAA's UAS Integration Office (AFS-80) within 24 hours. Petitioner will report accidents to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.gov.

VI. Privacy

There is little concern that the proposed flights will cause invasions of privacy because all flights will occur (i) over public spaces, where there is no expectation of privacy, and around participating individuals or (ii) over private, restricted property where applicant has permission from the landowner/authorized agent to film. When the UA is being flown, the onboard cameras will be focused on the film or inspection area, not on nonparticipating individuals who may be present during filming.

VII. Public Interest and Safety

The planned UA use will increase ground safety in both the television and movie industry, and the construction industry. The enhanced safety and reduced environmental impact achieved using a 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 UA operation enabled by this exemption is in the public interest.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 – size,

weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight and national security – provide more than adequate justification for the grant of the requested exemption allowing commercial operation of applicant’s UA for filming the television and movie industry and the construction industry, pursuant to petitioner’s rules of operation.

A. Motion Picture and Television Industry Filming

As the FAA has repeatedly recognized in granting other exemptions under Section 333, the use of a UA to take videos and photography over closed, scripted, motion picture and television sets significantly increases the level of safety for both the actors and crew. Currently, filmmakers use manned aircraft, which can weigh 6,000 lbs. or more. Manned aircraft also, by definition, carry a pilot and other crew. They carry flammable fluids, and require large areas to take off, operate over, and land.

By using the DJI Inspire 1, many of these dangerous conditions will be alleviated. The DJI Inspire 1 weighs under 15 lbs. The pilot and flight crew will be safely on the ground rather than several hundred feet in the air. The UA is powered by a battery, and requires a small area to operate in. The FAA has previously determined that using a UA such as the DJI Inspire 1 will provide a greater level of safety when filming for the motion picture and television industry. Exemption No. 11062.

VIII. Regulations from Which Exemption is Requested

A. Appendix A: FARs as to which Wild Horses wishes the same determination to be made as has been made previously.

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
21(h)	1, 2, 3, 4, 5, 16, 25, 28, 29, 34, 35	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11111, 11110, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11189, 11191, 11192, 11193, 11195
43.7	13, 14	No. 11208
43.11	12	No. 11208
45.11	30	No. 11208
45.27	39	No. 11188
45.29	30	Nos. 11136, 11157, 11170, 11185, 11193
61.113	7	See Appendix B for argument regarding why petitioner should be exempted from the private pilot license requirement
91.7(a)	12	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11177, 11178, 11184, 11185, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.9(b)(2)	22	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11174, 11177, 11178, 11184, 11185, 11189, 11192, 11193, 11195
91.9(c)	30	Nos. 11136, 11170, 11171, 11174, 11185
91.103(b)(2)	3, 9, 16, 17, 18, 19, 20, 28	No. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11138, 11150, 11153, 11156, 11158, 11160, 11161, 11166, 11167, 11171, 11172, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.105	6	No. 11185
91.113(b)	3, 32	No. 11238
91.119(c)	4, 34	Nos. 11162, 11163, 11164, 11165, 11166, 111080, 111109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
91.121	4	Nos. 11162, 11163, 11164, 11165, 11166, 111080, 111109, 11136, 11138, 11150, 11153, 11156, 11160, 11161, 11166, 11167, 11170, 11171, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193
91.151(a)	17, 18	Nos. 11110, 11153, 11156, 11161; 111109, 11110, 11112, 11136, 11138, 11150, 11153, 11156, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193
91.203 (a) and (b)	22	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195
91.215	26, 27	No. 11185, 11195
91.403	12, 13, 14	No. 11185
91.405(a)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.407(a)(1)	14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.409(a)(1)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.409(a)(2)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
91.417(a)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.417(b)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204

**B. Appendix B: Wild Horses's argument for exemption from 14 C.F.R. §61.113:
Private pilot privileges and limitations: Pilot in command.**

Wild Horses requests an exemption from 14 C.F.R. §61.113 so that the PIC of the UA will not be required to possess a private or commercial pilot's license. As the FAA and numerous other national airspace regulators have recognized, UA operations conducted by persons who do not hold a pilot's license can still achieve the equivalent level of safety of current operations by manned aircraft with pilots holding a private or commercial pilot's license.

Although it recognizes that a pilot's license is unnecessary for safe UA operation, the FAA has to date declined to allow grant exemptions under Section 333 that would permit individuals who possess neither a private nor a commercial pilot's certificate to conduct commercial UA operations. It has specified two reasons for declining to do so. First, it has stated that it does not possess the authority under Section 333 to exempt individuals from the requirement under 49 U.S.C. §44711 to hold an airman certificate authorizing the airman to serve in the capacity for which the certificate was issued. Exemption No. 11110 at 14. Second, the FAA has concluded that the Department of Homeland Security (DHS) security screening required of all certified airmen meets the statutory requirement in Section 333 that operations not pose a threat to national security. Exemption No. 11110 at 15.

Wild Horses respectfully requests that the FAA reconsider its position. There is no dispute that it is unnecessary for an operator of a UA to go through the rigorous process of becoming a certified pilot in order to safely operate a UA. In addition, the FAA does have the authority to exempt UA operators from the requirement in 49 U.S.C. §44711 to hold an airman certificate for "serv[ing] in the capacity for which the certificate was issued." Indeed, it has exercised that authority repeatedly in the Section 333 process. Finally, the FAA's security concerns can be addressed by a variety of methods involving operator background checks to be conducted by government agencies.

1. The FAA and foreign regulators recognize that obtaining a manned aircraft pilot license is unnecessary for safe operation of a UA

The FAA, like the other national airspace regulators that have considered the issue, has concluded that UA operations conducted by persons who do not hold a pilot's license can still achieve the equivalent level of safety of current operations by manned aircraft with pilots holding a private or commercial pilot's license. In its recent UAS NPRM, the FAA stated:

"While these airman certification requirements are necessary for manned aircraft operations, they impose an unnecessary burden for many small UAS operations. This is because a person typically obtains a private or commercial pilot certificate by learning how to operate a manned aircraft. Much of that knowledge would not be applicable to small UAS operations because a small UAS is operated differently than manned aircraft. In addition, the knowledge currently necessary to obtain a private or commercial pilot certificate would not equip the certificate holder with the tools necessary to safely operate a small UAS... Thus, requiring persons wishing to operate a small UAS to obtain a private or commercial pilot certificate imposes the cost of certification on those persons, but does not result in a significant safety benefit because the process of obtaining the certificate does

not equip those persons with the tools necessary to mitigate the public risk posed by small UAS operations.” Operation and Certification of Small Unmanned Aircraft, 80 Fed. Reg. 9543 at 9550 (proposed Feb. 23, 2015 (to be codified at 14 C.F.R. Parts 21, 43, 45, et al.)).

The FAA’s conclusion that manned aircraft flying experience is unnecessary for the operation of a UA is supported by research by the FAA and the Army Research Laboratory. They demonstrate that UAs, even those much larger than the sUAS proposed by Wild Horses, can be safely flown by non-certificated pilots with a small amount of training. For example, one Army Research Laboratory study concluded:

“[T]he specific motor skills needed to control the radio-controlled UAV would have to be learned by aviators independently of the motor skills learned in flying an aircraft. In particular, the somatic and visual cues that pilots use during aircraft landings would not be useful (and perhaps even counter-productive) for the different skill sets and perceptual viewpoint necessary for radio-controlled landings.”¹

Additional research reports lend further support for the exclusion requested. For example, a report sponsored by the FAA concluded that “We know that certain systems, like the U.S. Army Hunter and Shadow systems, are successfully flown by pilots with no manned aircraft experience.”²

In addition, foreign government airspace regulators that have examined the issue have consistently recognized that the skills required to fly a manned aircraft are irrelevant to operating a UA. For that reason, they have concluded that UA operators do not need to have a private or commercial pilot’s license. Canada, for example, does not require a pilot’s license to operate a UA. Transport Canada requires training of UA operators, but that training is limited to pilot ground school and flight operation training on UAs, not manned aircraft.³ Moreover, Canada allows this training to be “provided by other pilots, manufacturers, [UA] flight training organizations or . . . self taught.”⁴

¹ Michael J. Barnes, Beverly G. Knapp, Barry W. Tillman, Brett A. Walters & Darlene Veliki, *Crew systems analysis of unmanned aerial vehicle (UAV) future job and tasking environments*, Technical Report ARL-TR-2081, Aberdeen Proving Ground, MD: Army Research Laboratory, page 12 (2000), available at <http://www.dtic.mil/dtic/tr/fulltext/u2/a374230.pdf>.

² Kevin W. Williams, *Unmanned Aircraft Pilot Medical Certification Requirements*, Report DOT/FAA/AM-07/3, FAA Civil Aerospace Medical Institute, page 2, (2007), available at <http://fas.org/irp/program/collect/ua-pilot.pdf>. While the authors speculated that UAS use in populated areas may change this assessment, indicating further research was needed to address this concern, this concern is inapplicable as Wild Horses’s flights will not be in congested areas. See

also Jason S. McCarley & Christopher D. Wickens, *Human Factors Implications of UAVs in the National Airspace*, Institute of Aviation, Aviation Human Factors Division, University of Illinois at Urbana-Champaign, 13 (2004), available at <http://www.tc.faa.gov/logistics/grants/pdf/2004/04-G-032.pdf>.

³ See Civil Aviation, Standards, Transport Canada, Advisory Circular: Guidance Material for Operating Unmanned Air Vehicle Systems under an Exemption at 14 and 18-22, (Nov. 27, 2014) available at <http://www.tc.gc.ca/media/documents/ca-opssvs/ac-600-004.pdf>.

Similarly, the United Kingdom's Civil Aviation Authority (CAA) recognized that determining "Remote Pilot qualification requirements on the same basis as manned aircraft may yield requirements that are too inflexible, too onerous and inappropriate for UAS operations."⁵ As a result, the CAA only requires UA operators to demonstrate UA operator competence.⁶ While there are a variety of ways to demonstrate competence, the most common is to complete a course that will lead to a ground exam and flight test. Australia, too, requires only passage of a UA-specific ground school program in lieu of a private pilot license.⁷ Finally, more than a dozen countries, including Germany, Italy, France, Spain and the Netherlands, have adopted the National UAS Certificate for Small Unmanned Aircraft (BNUC-S) Standard for UA pilot certification.⁸ This standard results in a type-specific UA certificate and does not require the operator to have a pilot's license. The process involves taking a short ground school course, passing a ground school test and then passing a practical test on commercial operation of the specific UAS per the UAS manufacturer's operations manual.

All of this experience and evidence indicates that the proposed exemption will provide a greater level of safety than operations under 14 C.F.R. §61.113. In this instance, the PIC has had decades of UA experience. He has focused his training and education on UAs generally, and in particular on the aircraft to be operated, rather than taking additional time and risk to train on a manned aircraft, weighing several thousand pounds and carrying highly flammable fuel.

The FAA has concluded in the NPRM that such UA-specific training is more than sufficient to provide an equivalent level of safety for UA operations. Sometime in the next 18-24 months, that position will be enshrined in a valid regulation. However, in the meantime, the FAA claims it lacks the authority to relax the requirement to possess a pilot certificate. As we show in the next section, that position is both incorrect and contradicted by the FAA's recent decisions.

2. The FAA has and has already exercised the authority to exempt applicants from the airman certificate requirement

The FAA claims that it lacks authority to exempt UA operators from the requirement of 49 U.S. §44711 to hold an airman certificate authorizing the airman "to serve in the capacity for which the certificate was issued." See, e.g., Exemption No. 11110 at 14. This claim is inconsistent with both (i) the statutory language of that section and Section 333, and (ii) numerous recent FAA decisions.

⁴ *Id.* at 14.

⁵ Civil Aviation Authority, Safety Regulation Group, Unmanned Aircraft System Operations in UK Airspace – Guidance, Section 2, Chapter 5, Page 2 (Aug. 10, 2012), *available at* <https://www.caa.co.uk/docs/33/CAP722.pdf>.

⁶ Civil Aviation Authority, Unmanned Aircraft and Aircraft Systems, *available at* <http://www.caa.co.uk/default.aspx?catid=1995&pagetype=90>

⁷ Australian Government Civil Aviation Safety Authority, *available at* http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100374.

⁸ See EuroUSC International, "Pilot Qualification," *available at* <http://eurousc.com/services/pilot-qualifications/>.

The operative part of 49 USC §44711 provides that a “person may not . . . serve in any capacity as an airman with respect to a civil aircraft, . . . used, or intended for use, in air commerce — (A) without an airman certificate authorizing the airman to serve in the capacity for which the certificate was issued . . . “ If the FAA’s interpretation were correct, this language would require that any person wishing to operate a UA for commercial operations have an airman certificate authorizing the person to serve as an airman in commercial operations.

However, in all of its recent grants of Section 333 petitions, the FAA has – without explicitly acknowledging the fact - exempted commercial UA operators from the § 44711(A) requirement that they hold an airman certificate authorizing them “to serve in the capacity for which the certificate was issued.” It has done so by allowing them to operate a UA so long as they hold a private pilot’s or sport pilot’s authorization, even though such a certificate does not permit commercial operations. Exemption No. 11062 at 15-18; Exemption No. 11110 at 14-16; Exemption No. 11191 at 3-5; and Exemption No. 11229 at 3 and 8.

The FAA argues that it cannot exempt applicants from the requirements of §44711 because, while the specific language of Section 333 grants it limited statutory flexibility relative to 49 U.S.C. §44704 for the purposes of airworthiness certification, Section 333 does not provide flexibility relative to §44711 and other sections of Title 49. Exemption No. 11110 at 14. This argument ignores the plain language of the statute. The relevant language of Section 333 is:

(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.

The language of Section 333(b) is permissive: it requires that the Secretary “determine, at a minimum . . . 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).” Nothing in (b) precludes the Secretary from determining whether or not a pilot’s license is required for operation of a UA identified under paragraph (b)(1).

Indeed, the FAA has implicitly conceded the point by granting exemptions from the requirement that commercial UA operators hold a commercial pilot certificate. From an analytical standpoint, there is no difference between granting an exemption from the commercial pilot’s license requirement and granting an exemption from the private or sport pilot’s license requirement. Both are clearly exemptions from a specific statutory requirement in 49 U.S.C. §44711. If the FAA has the statutory authority under Section 333(b) to do the former, it has the same authority to do the latter.⁹

For all of the reasons set forth above, the FAA should reconsider its position and exercise its full authority to grant an exemption from all the requirements of 49 USC §44711, so that a person serving as a commercial UA operator need not have a pilot’s license.

⁹ The FAA has not specifically identified the statutory provision that underpins its authority to grant the exemptions from the commercial pilot’s license requirement. Whether the statutory basis is Section 333 or some other provision makes no difference. If there is a basis for a partial exemption from in 49 U.S.C. § 44711, that basis also justifies an exemption from the entire provision.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

Charles Franklin, Inc.

8424 Bernard Road
Sanger, TX 76266

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Operation of DJI Inspire 1 Unmanned Aircraft Systems at or below 200 feet Above Ground Level (AGL) for the purpose of aerial data collection and closed set motion picture filming.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

N/A

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

Note-This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions are set forth and attached.

This certificate FAA-2015-1022-333E is effective from June 23, 2015 to June 30, 2017 and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

/S/

FAA Headquarters, AJV-115
(Region)

Jacqueline R. Jackson
(Signature)

June 15, 2015
(Date)

Manager, UAS Tactical Operations Section
(Title)

STANDARD PROVISIONS

A. General.

1. The approval of this COA is effective only with an approved FAA Grant of Exemption.
2. A copy of the COA including the special limitations must be immediately available to all operational personnel at each operating location whenever UAS operations are being conducted.
3. This authorization may be canceled at any time by the Administrator, the person authorized to grant the authorization, or the representative designated to monitor a specific operation. As a general rule, this authorization may be canceled when it is no longer required, there is an abuse of its provisions, or when unforeseen safety factors develop. Failure to comply with the authorization is cause for cancellation. The operator will receive written notice of cancellation.

B. Safety of Flight.

1. The operator or pilot in command (PIC) is responsible for halting or canceling activity in the COA area if, at any time, the safety of persons or property on the ground or in the air is in jeopardy, or if there is a failure to comply with the terms or conditions of this authorization.

See-and-Avoid

Unmanned aircraft have no on-board pilot to perform see-and-avoid responsibilities; therefore, when operating outside of active restricted and warning areas approved for aviation activities, provisions must be made to ensure an equivalent level of safety exists for unmanned operations consistent with 14 CFR Part 91 §91.111, §91.113 and §91.115.

a. The pilot in command (PIC) is responsible:

- To remain clear and give way to all manned aviation operations and activities at all times,
- For the safety of persons or property on the surface with respect to the UAS, and
- For compliance with CFR Parts 91.111, 91.113 and 91.115

b. UAS pilots will ensure there is a safe operating distance between aviation activities and unmanned aircraft (UA) at all times.

c. Visual observers must be used at all times and maintain instantaneous communication with the PIC.

d. The PIC is responsible to ensure visual observer(s) are:

- Able to see the UA and the surrounding airspace throughout the entire flight, and
 - Able to provide the PIC with the UA's flight path, and proximity to all aviation activities and other hazards (e.g., terrain, weather, structures) sufficiently for the PIC to exercise effective control of the UA to prevent the UA from creating a collision hazard.
- e. Visual observer(s) must be able to communicate clearly to the pilot any instructions required to remain clear of conflicting traffic.
2. Pilots are reminded to follow all federal regulations e.g. remain clear of all Temporary Flight Restrictions, as well as following the exemption granted for their operation.
 3. The operator or delegated representative must not operate in Prohibited Areas, Special Flight Rule Areas or, the Washington National Capital Region Flight Restricted Zone. Such areas are depicted on charts available at http://www.faa.gov/air_traffic/flight_info/aeronav/. Additionally, aircraft operators should beware of and avoid other areas identified in Notices to Airmen (NOTAMS) which restricts operations in proximity to Power Plants, Electric Substations, Dams, Wind Farms, Oil Refineries, Industrial Complexes, National Parks, The Disney Resorts, Stadiums, Emergency Services, the Washington DC Metro Flight Restricted Zone, Military or other Federal Facilities.
 4. All aircraft operated in accordance with this Certificate of Waiver/Authorization 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.

C. Reporting Requirements

1. Documentation of all operations associated with UAS activities is required regardless of the airspace in which the UAS operates. NOTE: Negative (zero flights) reports are required.
2. The operator must submit the following information through <mailto:9-AJV-115-UASOrganization@faa.gov> on a monthly basis:
 - a. Name of Operator, Exemption number and Aircraft registration number
 - b. UAS type and model
 - c. All operating locations, to include location city/name and latitude/longitude
 - d. Number of flights (per location, per aircraft)
 - e. Total aircraft operational hours
 - f. Takeoff or Landing damage

- g. Equipment malfunctions. Reportable malfunctions include, but are not limited to the following:
 - (1) On-board flight control system
 - (2) Navigation system
 - (3) Powerplant failure in flight
 - (4) Fuel system failure
 - (5) Electrical system failure
 - (6) Control station failure
- 3. The number and duration of lost link events (control, performance and health monitoring, or communications) per UA per flight.

D. Notice to Airmen (NOTAM).

A distant (D) NOTAM must be issued when unmanned aircraft operations are being conducted. This requirement may be accomplished:

- a. Through the operator's local base operations or NOTAM issuing authority, or
- b. By contacting the NOTAM Flight Service Station at 1-877-4-US-NTMS (1-877-487-6867) not more than 72 hours in advance, but not less than 24 hours prior to the operation, unless otherwise authorized as a special provision. The issuing agency will require the:
 - (1) Name and address of the pilot filing the NOTAM request
 - (2) Location, altitude, or operating area
 - (3) Time and nature of the activity.
 - (4) Number of UAS flying in the operating area.

AIR TRAFFIC CONTROL SPECIAL PROVISIONS

A. Coordination Requirements.

- 1. Operators and UAS equipment must meet the requirements (communication, equipment and clearance) of the class of airspace they will operate in.
- 2. Operator filing and the issuance of required distance (D) NOTAM, will serve as advance ATC facility notification of UAS operations in an area.
- 3. Operator must cancel NOTAMs when UAS operations are completed or will not be conducted.
- 4. Coordination and deconfliction between Military Training Routes (MTRs) is the operator's responsibility. When identifying an operational area the operator must

evaluate whether an MTR will be affected. In the event the UAS operational area overlaps (5 miles either side of centerline) an MTR, the operator will contact the scheduling agency 24 hours in advance to coordinate and deconflict. Approval from the scheduling agency is not required. Scheduling agencies are listed in the Area Planning AP/1B Military Planning Routes North and South America, if unable to gain access to AP/1B contact the FAA at email address <mailto:9-AJV-115-UASOrganization@faa.gov> with the IR/VR routes affected and the FAA will provide the scheduling agency information. If prior coordination and deconfliction does not take place 24 hours in advance, the operator must remain clear of all MTRs.

B. Communication Requirements.

1. When operating in the vicinity of an airport without an operating control tower, announce your operations in accordance with the FAA Aeronautical Information Manual (AIM) 4-1-9 Traffic Advisory Practices at Airports without Operating Control Towers.

C. Flight Planning Requirements.

Note: For all UAS requests not covered by the conditions listed below, the exemption holder may apply for a new Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA) at <https://oeaaa.faa.gov/oeaaa/external/uas/portal.jsp>

This COA will allow small UAS (55 pounds or less) operations during daytime VFR conditions under the following conditions and limitations:

- (1) At or below 200 feet AGL; and
- (2) Beyond the following distances from the airport reference point (ARP) of a public use airport, heliport, gliderport, seaplane base and military airports listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications.
 - a) 5 nautical miles (NM) from an airport having an operational control tower; or
 - b) 3 NM from an airport having a published instrument flight procedure, but not having an operational control tower; or
 - c) 2 NM from an airport not having a published instrument flight procedure or an operational control tower; or
 - d) 2 NM from a heliport, gliderport or seaplane base

D. Emergency/Contingency Procedures.

1. Lost Link/Lost Communications Procedures:

- 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 and land.
- The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

2. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries defined in this COA must be reported to the FAA via email at <mailto:9-AJV-115-UASOrganization@faa.gov> 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

AUTHORIZATION

This Certificate of Waiver or Authorization does not, in itself, waive any Title 14 Code of Federal Regulations, nor any state law or local ordinance. Should the proposed operation conflict with any state law or local ordinance, or require permission of local authorities or property owners, it is the responsibility of the operator to resolve the matter. This COA does not authorize flight within Special Use airspace without approval from the scheduling agency. The operator is hereby authorized to operate the small Unmanned Aircraft System in the National Airspace System.