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

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

August 19, 2015

Exemption No. 12516
Regulatory Docket No. FAA−2015−1566

Mr. Thomas M. Hirschmann
FBAP Inc.
699 Osceola Avenue
Winter Park, FL 32789

Dear Mr. Hirschmann:

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

By letter dated May 5, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of FBAP Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and cinematography.

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

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

Airworthiness Certification

The UAS proposed by the petitioner are the DJI Phantom 2, DJI Inspire 1, and Gryphon Dynamics X8.

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

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

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

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, FBAP Inc. is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, FBAP Inc. is hereafter referred to as the operator.

[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.

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

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2, DJI Inspire 1, and Gryphon Dynamics X8 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the

operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC

qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

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

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

Sincerely,
/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

Petition for Exemption

May 05, 2015

US Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
West Building Ground Floor, Room W12-140
Washington, DC 20590

RE: Request for Exemption under Section 333 of the FAA Modernization and Reform Act and Part 11 of the Federal Aviation Regulations from 14 C.F.R § 61.315 (c), 14 C.F.R. § 91.119, 14 C.F.R. § 9.121, 14 C.F.R. § 91.151 (a), 14 C.F.R. § 91.405 (a), 14 C.F.R. § 91.407 (a) (1), 14 C.F.R. § 91.409 (a) (2), 14 C.F.R. § 91.417 (a) & (b)

Dear Sir or Madam:

Pursuant to Section 333 of the Federal Aviation Administration ("FAA") Modernization and Reform Act of 2012 and 14 C.F.R. Part 11, FBAP, Inc. ("FBAP") operator of small Unmanned Aircraft Systems ("UASs") equipped to conduct aerial photography and cinematography, hereby applies for an exemption from the listed Federal Aviation Regulations ("FARs") to allow commercial operation of its UASs, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333.

This petition for exemption is made based on information outlined in this Petition for Exemption, as well as the accompanying Flight Operations and Procedures Manual and UAS User Manuals ("Manuals"). FBAP submits these supporting materials as confidential documents pursuant to 14 C.F.R. § 11.35 (b), as the materials contain confidential commercial and/or proprietary information as well as operating policies and procedures that are not generally available to the public.

Petitioner's contact information:

FBAP Inc.
Attn: Thomas M. Hirschmann
699 Osceola Ave., Winter Park, FL 32789
Email: tom@flybyap.com
Phone: 407-280-3332

Description of Proposed Operation:

FBAP seeks a 333 exemption and intends to use their small UASs for photography and cinematography work. FBAP's operations have been tailored to meet the requirements of the FAA and to provide an equivalent level of safety that is superior to performing the same work using fixed wing aircraft or helicopters. FBAP will operate UASs in compliance with their Flight Operations and Procedures Manual, UAS User Manuals, and in accordance with the conditions and limitations of this Petition for Exemption.

Regulations from which the exemption is requested:

- 14 C.F.R § 61.315 (c)
- 14 C.F.R. § 91.119 (c)
- 14 C.F.R. § 9.121
- 14 C.F.R. § 91.151 (a)
- 14 C.F.R. § 91.405 (a)
- 14 C.F.R. § 91.407 (a) (1)
- 14 C.F.R. § 91.409 (a) (2)
- 14 C.F.R. § 91.417 (a) & (b)

Qualifications for Summary Processing:
FBAP would not set precedent. Exemption #'s 11062, 11063, 11064, 11065, 11067, and 11080 are all previously granted petitions to allow operation of UASs for the same purpose of aerial photography and cinematography. This Exemption should qualify for summary processing as the FAA has already given public notice of and granted similar exemptions.

Description of UAS, Operation, and Environment in accordance with Section 333 Requirements:
In accordance with Section 333 of the Reform Act, the UASs used by FBAP would not create a hazard to users of the National Airspace System ("NAS") or the public or pose a threat to national security in light of the following:

- The UASs' size, weight, speed, and operation capability;
- Operation of the UASs in close proximity to airports and populated areas; and,
- Operation of the UASs within visual line of sight ("VLOS") of the operator

FBAP's UASs are rotorcraft, weighing 55 lbs. or less including payload. They operate, under normal conditions at a speed of no more than 45 miles per hour and they have the capability to hover, and move in the vertical and horizontal planes simultaneously. They will operate at altitudes of no more than 400 feet above ground level ("AGL") and they will operate only within VLOS of the pilot in command ("PIC"). FBAP will only operate the UASs within a controlled access area as described in detail in the Flight Operations and Procedures Manual. Operations in compliance with the Flight Operations and Procedures Manual and UAS User Manuals will ensure that the UASs will not create a hazard to users of the NAS or the public and that the UASs will operate in compliance with the conditions set forth in this application.

Equivalent Level of Safety and Limitations/Conditions:
FBAP proposes that the exemption requested herein apply to civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure because the proposed operations represent a safety enhancement to the already safe filming operations conducted with conventional aircraft. These limitations and conditions are very similar to or taken directly from exemptions granted to film companies.

The limitations and conditions to which FBAP agrees to be bound when conducting commercial operations under an FAA issued exemption include:

1. The UAS will weigh less than 55 pounds, including energy sources(s) and equipment. Operations will be limited to the aircraft described in the confidential Flight Operations and Procedures Manual and UAS User Manuals attached as Exhibits 1, 2, 3, and 4.

2. The UAS will not be flown at a ground speed exceeding 45 miles per hour.

3. Flights will be operated at an altitude of no more than 400 feet AGL as indicated by the procedures specified in the Flight Operations and Procedures Manual. All altitudes reported to Air Traffic Control ("ATC") will be in feet AGL.

4. The UAS will be operated within 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.

5. All operations will utilize a visual observer ("VO"). The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC will be able to communicate verbally at all times as indicated by the procedures in the Flight Operations and Procedures Manual. The UAS will be within VLOS of the VO at all times and the VO will only use human vision unaided by any device other than corrective lenses.

6. FBAP will follow the Flight Operations and Procedures Manual and the UAS User Manuals ("Manuals") as accepted by the FAA. Any additional requirements identified in the final conditions for this exemption will be adhered to by FBAP and added to the Manuals. The Manuals will be maintained and made available to the Administrator upon request. If FBAP determines that any update or revision would affect the basis of this exemption, then FBAP will petition for amendment to the exemption. FBAP will present updated and revised documents if it petitions for extension or amendment.

7. Prior to each flight the PIC will inspect the UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft will not operate until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight. The ground control systems will be included in the preflight inspection. All maintenance and alterations will be properly documented in the aircraft records.

8. Any UAS that has undergone maintenance or alternations that affect the UAS operation or flight characteristics, e.g. replacement of a flight critical component, will undergo a functional test flight in accordance with the Manuals. The PIC who conducts the functional test flight will make an entry of the flight in the UAS' aircraft records.

9. FBAP and the PIC will follow the UAS aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements. UAS maintenance/component/overhaul, replacement, and inspection/maintenance requirements have been established and described in the Manuals.

10. The PIC will possess at least a sport pilot certificate and at least a valid driver's license. The PIC will also meet the flight review requirements specified in 14 C.F.R. § 61.56 in an aircraft in which the PIC is rated on his/her pilot certificate.

11. Prior to operations conducted for aerial photography and cinematography, the PIC will have accumulated and logged, in a manner consistent with 14 C.F.R. § 61.51(b), a minimum of 200 flight cycles and 25 hours of total time as a UAS rotorcraft pilot and at least 10 hours logged as a UAS pilot with a similar UAS type (single blade or multirotor). Prior documented flight experience that was obtained in compliance with applicable regulations will be used to satisfy this requirement. Training, proficiency, and experience-building flights may also be conducted under this grant of exemption to accomplish the required flight cycles and flight time. During training, proficiency, and experience-building flights, all persons not essential for flight operations will be considered non-participants, and the PIC will operate the UAS with appropriate distance from non-participants in accordance with 14 C.F.R. § 91.119.

12. Prior to operations conducted for the purpose of aerial photography and cinematography, the PIC will have accumulated and logged, in a manner consistent with 14 C.F.R. § 61.51(b), a minimum of five hours as UAS pilot operating the make and model of UAS to be utilized for operations under the exemption and three takeoffs and landings in the preceding 90 days. Training, proficiency, experience building, and takeoff and landing currency flights can be conducted under this grant of exemption to accomplish the required flight time and 90 day currency. During training, proficiency, experience building, and takeoff and landing currency flights all persons not essential for flight operations are considered nonparticipants, and the PIC will operate the UAS with appropriate distance from nonparticipants in accordance with 14 C.F.R. § 91.119.

13. Prior to any flight operations authorized by this grant of exemption, the PIC and VO will have successfully completed a qualification process as outlined in the Flight Operations and Procedures Manual. As this is a requirement stipulated by FBAP, the test will be developed and implemented by FBAP. A record of completion of this qualification process will be documented and made available to the Administrator upon request.

14. Prior to operations conducted for aerial photography and cinematography, a flight demonstration, administered by PIC will be successfully completed and documented. This documentation will be available for review upon request by the Administrator. Because the knowledge and airmanship test qualifications have been developed by FBAP, FBAP will conduct these tests in accordance with the Flight Operations and Procedures Manual.

15. The UAS may not be operated directly over any person, except authorized and consenting production personnel, below an altitude that is hazardous to persons or property on the surface in the event of a UAS failure or emergency.

16. Regarding the distance from a participating person, the Flight Operations and Procedures Manual includes safety mitigations for authorized and consenting production personnel. At all times, those persons will be essential to the access controlled areas of film operations. Because these procedures are specific to participating persons, no further Flight Standards District Offices ("FSDO") or Aviation Safety Inspector ("ASI") approval is necessary for reductions to the distances specified in the attached Flight Operations and Procedures Manual. This is consistent with the manned aircraft procedures described in FAA Order 8900.1, V3, C8, S1 *Issue a Certificate of Waiver for Motion Picture and Television Filming.*

17. Regarding distance from nonparticipating persons, the operator will ensure that no persons are allowed within 400 feet of the area except those consenting to be involved and necessary for the filming production. This provision may be reduced to no less than 200 feet if it would not adversely affect safety and the Administrator has approved it. For example, an equivalent level of safety may be determined by an aviation safety inspector's evaluation of the filming production area to note terrain features, obstructions, buildings, safety barriers, etc. Such barriers may protect non-participating persons (observers, the public, news media, etc.) from debris in the event of an accident. This is also consistent with the same FAA order 8900.1, V3, C8, S1.

18. If the UAS loses communications or loses its Global Positioning System (GPS) signal, the UAS will be programmed to return to a pre-determined location within the security perimeter and land or be recovered in accordance with the Flight Operations and Procedures Manual.

19. The UAS will abort the flight in the event of unpredicted obstacles or emergencies in accordance with the Flight Operations and Procedures Manual.

20. Each UAS operation will be completed within 30 minutes flight time or with 25% battery power remaining, whichever occurs first.

21. The operator will obtain an Air Traffic Organization ("ATO") issued certificate of Waiver or Authorization ("COA") prior to conducting any operations over 200 feet AGL. The operator will request a Notice to Airman ("NOTAM") not more than 72 hours in advance, but not less than 48 hours prior to the operation. FBAP plans to conduct most flights under 200 feet AGL to comply with the blanket COA approval.

22. All aircraft operated in accordance with this exemption will be identified by serial number, registered in accordance with 14 C.F.R. part 45 and have identification (N-Number) markings in accordance with 14 C.F.R. part 45, Subpart C. Markings will be as large as practicable.

23. The operator will document and maintain a record of the UAS maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the UAS as detailed in the Flight Operations and Procedures Manual.

24. Each UAS will comply with all manufacturer safety bulletins and firmware updates.

25. FBAP has developed UAS technician qualification criteria as detailed in the Flight Operations and Procedures Manual.

26. The preflight inspection accounts for all discrepancies, i.e. inoperable components, items, or equipment, not covered in the relevant preflight inspection sections of the Flight Operations and Procedures Manual.

27. The radio frequency spectrum used for operation and control of the UAS complies with Federal Communications Commission ("FCC") or other appropriate government oversight agency requirements.

28. The documents required under 14 C.F.R. § 91.9 and § 91.203 will be available to the PIC at the ground control station of the UAS any time the aircraft is operating. These documents will be made available to the Administrator or any law enforcement official upon request.

29. The UAS will remain clear and yield the right of way to all other manned operations and activities at all times (including, but not limited to, ultralight vehicles, parachute activities, parasailing activities, hang gliders, etc.).

30. UAS operations will not be conducted during night, as defined in 14 C.F.R. § 1.1. All operations will be conducted under visual meteorological conditions ("VMC"). Flights under special visual flight rules ("SVFR") are not authorized.

31. The UAS will not be operated by the PIC from any moving device or vehicle.

32. The UAS 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.

33. The UAS will not operate in Class B, C, or D airspace without written approval from the FAA. The UAS will not operate within 5 nautical miles of the geographic center of a non-towered airport as denoted on a current FAA published aeronautical chart unless a letter of agreement with the

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 will be made available to the Administrator upon request.

34. Any 1) incident, 2) accident, or 3) flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA will be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents will be reported to the National Transportation Safety Board ("NTSB") per instructions contained on the NTSB website: www.ntsb.gov. Further flight operations will not be conducted until the incident, accident, or transgression is reviewed by AFS-80 and authorization to resume operations is provided.

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 C.F.R. including, but not limited to, parts 45, 47, 61, and 91.

14 C.F.R § 61.315 (c) Sport Pilot Privileges and Limitations: Pilot in Command
Section 61.315 (c) limits sport pilots to non-commercial operations. Because the UAS will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety of current operations by requiring the PIC operating the aircraft to have a sport pilot's license rather than a commercial pilot's license to operate small UASs. Unlike conventional aircraft that carries the pilot and passengers, the UASs are remotely controlled with no living thing on board. The area of operation is controlled and restricted and all flights are planned and coordinated in advance as described in the Flight Operations and Procedures Manual. The level of safety provided by the requirements included in the Flight Operations and Procedures Manual exceeds that provided by a single individual holding a commercial pilot's certificate operating a conventional aircraft. The risks associated with the operation of the UAS are so diminished from the level of risk associated with commercial operations contemplated by Part 61 when drafted, that allowing operations of the UASs as requested with a sport pilot as the PIC exceeds the present level of safety achieved by 14 C.F.R. § 61.315 (c). The FAA has granted similar exemptions for private pilots to conduct similar operations in Exemptions 11062, 11063, 11064, 11065, 11066, 11067, and 11080.

14 C.F.R. § 91.119: Minimum Safe Altitudes
Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119 (d) allows helicopters to be operated at less than the minimums prescribed, provided the person operating the helicopter complies with any route or altitudes prescribed for helicopters by the FAA. As this exemption is for a UAS that is a rotorcraft and the exemption requests authority to operate at altitudes up to 400 feet AGL, or not more than 200 above an elevated platform from which filming is planned, an exemption may be needed to allow such operations. As set forth herein, except for the limited conditions stated in the Flight Operations and Procedures Manual, the UAS will never operate higher than 400 feet AGL. It will however be operated in an access controlled area, where buildings and people will not be exposed to operations without their pre-obtained consent. The equivalent level of safety will be achieved given the size, weight, speed of the UAS as well as the location where it is operated. No flight will be taken without the permission of the property owner or local officials. Because of the advance notice to the property owner and participants in the filming activity, all affected individuals will be aware of the planned flight operations as set forth in the Flight Operations and Procedures Manual. Compared to flight operations with aircraft or rotorcraft weighting far more than the maximum 55 lbs. proposed herein and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented with conventional aircraft operating at or below 400 feet AGL in the movie industry. In addition, the low-altitude operations of the UAS will ensure separation between these small UAS operations and the operations of conventional aircraft that must comply with Section 91.119.

14 C.F.R. § 9.121: Altimeter Settings
This regulation requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set " ... to the elevation of the departure airport or an appropriate altimeter setting available before departure." As the UAS may not have a barometric altimeter, but instead a GPS altitude read out, an exemption may be needed. An equivalent level of safety will be achieved by the operator, pursuant to the Flight Operations and Procedures Manual, confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

14 C.F.R. § 91.151 (a): Fuel Requirements for Flight in VFR Conditions
Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed - (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes." The battery powering the UAS provides a maximum of 40 minutes of powered flight. To meet the 30-minute reserve requirement in 14 C.F.R. § 91.151, UAS flights would be limited to approximately 10 minutes in length. Given the limitations on the UAS's proposed flight area and the location of its proposed operations within a predetermined area, a longer time frame for flight in daylight or night VFR conditions is reasonable. FBAP believes that an exemption from 14 C.F.R. § 91.151 (a) falls within the scope of prior exemptions. See Exemption 10673 (allowing Lockheed Martin Corporation to operate without compliance with FAR 91.151 (a)). Operating the small UAS, in a tightly controlled area where only people and property owners or official representatives who have signed waivers will be allowed, with less than 30 minutes of reserve fuel, does not engender the type of risks that Section 91.151 (a) was intended to alleviate given the size and speed of the small UAS. Additionally, limiting UAS flights to 10 minutes would greatly reduce the utility for which the exemption will be granted. FBAP believes that an equivalent level of safety can be achieved by limiting flights to 30 minutes or 25% of battery power whichever happens first. This restriction would be more than adequate to return the UAS to its planned landing zone from anywhere in its limited operating area. Similar exemptions have been granted to other operations, including Exemptions 2689F, 5745, 10673, 10808, 11062, 11063, 11065, 11066, 11067, and 11080.

14 C.F.R. § 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections
These regulations require that an aircraft operator or owner "shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter..." and others shall inspect or maintain the aircraft in compliance with Part 43. Given that these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to FBAP. An equivalent level of safety will be achieved because these small UASs are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the UAS can land immediately and will be operating from no higher than 400 feet AGL. As detailed in the Flight Operations and Procedures Manual, the operator will ensure that the UAS is in working order prior to initiating flight, will perform required maintenance, and will keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety. The FAA has granted exemptions for similar operations in Exemptions 11062, 11063, 11064, 11065, 11067, and 11080.

Approval of exemptions allowing commercial operations of UASs in the aerial photography and cinematography will enhance safety by reducing risk. Conventional film operations, using jet or piston powered aircraft, operate at extremely low altitudes just feet from the subject being filmed and in extreme proximity to people and structures; and present the risks associated with aircraft that weigh in the neighborhood of 4,000 lbs., carrying large amounts of jet A or other fuel (140 gallons for jet helicopters shown below). Such aircraft must fly to and from the film location. In contrast, a UAS

weighing fewer than 55 lbs. and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The UAS is carried to the film set and not flown. The UAS will carry no passengers or crew; therefore, it will not expose them to the risks associated with manned aircraft flights.

The operation of small UASs, weighting less than 55 lbs., conducted in the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein. These lightweight aircraft operate at slow speeds, close to the ground, and in a sterile environment and, as a result, are far safer than conventional operations conducted with turbine helicopters operating in close proximity to the ground and people.

All flights will occur over private or controlled access property with the property owner's prior consent and knowledge. Filming will be of people who have also consented to being filmed or otherwise have agreed to be in the area where filming will take place.

FBAP satisfies the criteria articulated in Section 333 of the Reform Act of 2012. As a result of the UASs' size, weight, speed, and operational capability as well as the PICs airman certificate, experience, and operating procedures including, but not limited to, appropriate proximity to airports, operating within access controlled areas, and maintaining visual line of sight, FBAP does not create a hazard to users of the national airspace or the public or pose a threat to national security. In consideration of the foregoing, this Petition for Exemption provides the FAA with more than adequate justification for granting the requested exemptions allowing FBAP to commercially operate UASs for aerial photography and cinematography.

FBAP thanks you for your time and prompt consideration of the requested exemptions. Please do not hesitate to contact FBAP should you have any questions or should you require any additional information to support the requested exemptions.

Sincerely,

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Exhibit 1: Flight Operations and Procedures Manual (CONFIDENTIAL)
Exhibit 2: DJI Phantom 2 UAS User Manual
Exhibit 3: DJI Inspire 1 UAS User Manual
Exhibit 4: Gryphon Dynamics X8 User Manual (CONFIDENTIAL)