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

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

August 10, 2015

Exemption No. 12406
Regulatory Docket No. FAA–2015–0976

Mr. Paul Russell
StoryView Video, LLC
622 Laura Drive
Falls Church, VA 22046

Dear Mr. Russell:

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 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of StoryView Video, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, inspection of structures and infrastructure, search and rescue, and training[1].

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.

[1] The petitioner also requested authority to conduct UAS training. At this time, the FAA is unable to authorize UAS operations for training until a further assessment is completed. When the FAA completes its review, we will proceed accordingly and no further action will be required by the petitioner. However, the petitioner is permitted to train its own pilot in commands and visual observers in accordance with condition no. 14 and the other conditions and limitations in this exemption.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom 2.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[2]. 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,

[2] 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.

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

Conditions and Limitations

In this grant of exemption, StoryView Video, LLC is hereafter referred to as the operator.

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

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 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

StoryView Video, LLC
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Falls Church, VA 22046
Email: paul@storyviewvideo.com
Phone: (703) 618-0207

April 2, 2015
U.S. Dept. of Transportation, Docket Operations
West Building Ground Floor, Room Wl2-140
1200 New Jersey Avenue, SE
Washington, DC 20590 VIA ELECTRONICALLY

Re: Exemption Request under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from: 14 CFR 21 subpart H; 14 CFR 45.23(b); 14 CFR 45.29; 14 CFR 61.113(a) and (b); 14 CFR 61.133; 14 CFR 91.7(a); 14 CFR 91.9(b)(2); 14 CFR 91.103; 14 CFR 91.109; 14 CFR 91.119; 14 CFR 91.121; 14 CFR 91.151(a); 14 CFR 91.203 (a) and (b); 14 C.F.R. 91.205 (b); 14 C.F.R. 91.215; 14 CFR 91.405 (a); 14 CFR 91.407 (a) (1); 14 CFR 91.409 (a)(1) and (2); 14 CFR 91.417(a) and (b); and 8900.227 Paragraph 16(c)(4) and Paragraph 16(e)(1)

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, StoryView Video, LLC, operator of a Small Unmanned Aircraft System (sUAS), which includes the Unmanned Aircraft (UA) and ground station-based equipment and crew described below, seeks an exemption from Federal Aviation Regulations ("FARs") detailed below, to allow commercial operation of its sUAS, 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.

Commercial operation of the sUAS, as described herein, which is equipped with camera(s) and sensors, would operate in the following manner:
1. Aerial photography and/or video for public and/or private use including real estate, architecture, land surveying, engineering and other related professional activities.
2. Aerial video and/or photography for public and/or private use including television, public events, cinematography and newsgathering.
3. Aerial inspection/photography of residential/commercial structures under contract with the owners or local government authority.
4. Aerial inspection/photography of residential/commercial utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers.

5. Aerial video/photography or providing live video feed to assist with search and rescue operations in cases of an emergency or natural disaster only when the local authorities or government has requested it by contract or donation.
6. Training to persons individually or belonging to both private and/or public organizations to increase awareness and improve safety for current and future UAS operations within the NAS.

As described fully below, the requested exemption would permit the operation of the designated small sUAS as set forth in this document under controlled conditions in the NAS that would be a) limited b) controlled c) predetermined and d) safe. Approval of this exemption would increase public awareness of sUAS operations and enhance safety to aid in fulfilling the Secretary of Transportation's (the FAA Administrator's) responsibilities to "….establish requirements for the safe operation of such aircraft systems in the national airspace system."

The name and contact information of the applicant are:

StoryView Video, LLC
Attn: Paul Russell
622 Laura Drive
Falls Church, VA 22046
Email: paul@storyviewvideo.com
Phone: (703) 618-0207

Regulations from which the exemption is requested:
14 CFR Part 21 subpart H
14 CFR 45.23 (b)
14 CFR 45.29
14 CFR 61.113 (a) & (b)
14 CFR 61.133
14 CFR 91.7 (a)
14 CFR 91.9 (b) (2)
14 CFR 91.103
14 CFR 91.109
14 CFR 91.119
14 CFR 91.121
14 CFR 91.151 (a)
14 CFR 91.203 (a) & (b)
14 C.F.R. 91.205 (b)
14 C.F.R. 91.215
14 CFR 91.405 (a)
14 CFR 91.407 (a) (1)
14 CFR 91.409 (a)(1) and (2)

14 CFR 91.417(a) and (b)
8900.227 Paragraph 16(c)(4) and Paragraph 16(e)(1)

StoryView Video, LLC, will operate the following model Small Unmanned Aircraft System (sUAS), which includes the Unmanned Aircraft (UA) and ground station-based equipment and crew.

THE UNMANNED AIRCRAFT (UA):
• The DJI Phantom 2, with a total weight of 1000g, or 2.205 lbs., including battery and propellers is a lightweight, battery operated, 4 motor rotorcraft in the form of a quadcopter that takes off and lands vertically, manufactured by DJI, PHANTOM 2 model, modified by the applicant to carry the following equipment in flight:
• A Zenmuse H3-3D GoPro Gimbal 3-axis camera stabilization system;
• A GoPro 3+ on-board camera capable of capturing imagery in the form of full color, high definition still photos and video;
• An on-board flight computer with GPS navigation and location ability that receives signals for flight controls from a ground-based transmitter/controller;
• Capability for an on-board telemetry system that delivers flight data from the on-board flight computer to the on-board radio transmitter including altitude AGL, horizontal and vertical speed, compass direction of flight and direction back to its launch site;
• Capability for a 600mW 5.8GHz on-board radio transmitter that transmits live video from the on-board camera plus all the flight data from the telemetry system described above.
• The diagonal length is 350mm.
• Under still air, the maximum speed is 15 m/s, or 33.55 mph, or 30 knots.
• The DJI Phantom 2 is powered by a 5200 mAh, 11.1V LiPo battery powering four E300 model motors.

THE GROUND STATION-BASED PART OF THE SYSTEM:
• A Pilot in Command (PIC) in operational control of a flight operation from beginning to end and who controls the UA while in the air;
• A 100 mW, 2.4GHz ISM radio transmitter/controller operated by the PIC to control the UA while in flight;
• A Visual Observer (VO) who provides a second pair of eyes to visually track the UA while in flight;
• Capability for a radio receiver that receives live video and flight data from the on-board camera and computer, and projects it all together onto a screen for the PIC to view during flight.

The sUAS will be equipped with a camera and camera stabilizing gimbal, and have the capability to be equipped with an OSD (on screen display) which provides the PIC with altitude, airspeed, battery life and direction.

Our sUAS flight controllers utilize GPS to limit the altitude above the ground, to limit the radius of the distance it flies from the PIC, and to exclude it from operations within designated Class B, C and D airspace including a no-fly zone feature.

Our sUASs have GPS guided failsafe functions allowing the autopilot system to fly back to the launch site autonomously. If the transmitter is disconnected the system will automatically trigger the return to home function and will land safely. If the connection is restored, the PIC can regain control of flight and land manually.

Our sUASs will manually operate only in VLOS and will operate only within a sterile area such as is described in the Flight Operations Manual (FOM) attached as Appendix A (hereinafter "the Manual"). Adherence to the Manual will ensure that the sUAS will "not create a hazard to the national airspace system or the public."

Given the small size and weight of the sUAS involved and the restricted sterile environment within which it will operate, the applicant falls squarely within that zone of safety (an equivalent level of safety) in which Congress envisioned that the FAA must, by exemption, allow commercial operations of sUASs to commence immediately. Also due to the size of the sUAS and the restricted areas in which the relevant sUAS will operate, approval of the application presents no national security issue. Given the clear direction in Section 333 of the Reform Act, the authority contained in the Federal Aviation Act, as amended; the strong equivalent level of safety surrounding the proposed operations, and significant public benefit, including enhanced safety, reduction in environmental impacts, including reduced emissions associated with allowing sUASs for movie and television operations, the grant of the requested exemption is in the public interest. Accordingly, the applicant respectfully requests that the FAA grant the requested exemption without delay.

PILOT IN COMMAND AND OBSERVER QUALIFICATIONS AND DUTIES

The PIC will maintain at least a Private Pilot Certificate and a current Class III medical certificate, or pass a knowledge test in order to obtain an FAA-approved drone operator license and be vetted by the TSA. The PIC will take a recurrent test every 24 months and be at least 17 years old.

The PIC will be allowed to fly during daytime hours only and must be able to see the drone at all times (though a second operator can be used as an observer). The PIC will have a minimum of 100 flight cycles and 25 hours of total time as a UA rotorcraft pilot and at least ten hours logged as a UA pilot with a similar UA type, plus have at least 2 hours flying time and 3 takeoffs and landings within 30 days in the type of sUAS utilized in operations.

The PIC is responsible for the safe and efficient operation of the aircraft. Specific duties include all preflight preparation, in flight operation and post flight requirements. Procedures include but are not limited to:

Safe flight operations

Risk assessment and mitigation to persons and property
Site suitability

The Visual Observer (VO) must have the visual acuity to observe the sUAS and be able to communicate clearly with the PIC utilizing hand signals, verbal communications, or 2 way radios.
The Visual Observer's duties are:
Notifying the PIC of any impending obstacles in the flight path of the sUAS.
Notifying the PIC of any deviations in the planned flight path of the sUAS.
Notifying the PIC if unauthorized persons enter the area of the planned flight.

HOW THIS REQUEST IS TO THE BENEFIT OF THE COMMUNITY AND/OR PUBLIC
The requested exemption would support an application for a commercial Certificate of Authorization to use the above described sUAS to conduct aerial videography and photography to enhance academic community awareness for those individuals and companies unfamiliar with the geographical layout of the Washington D.C. metropolitan and surrounding area, including Northern Virginia, Maryland, and Delaware, as well as to augment real estate listing videos.

Aerial videography for geographical awareness and for real estate marketing has been around for a long time through manned fixed wing aircraft and helicopters. For small budget real estate companies and average homeowners the expense of such aerial videography is cost prohibitive. Only large companies and high end Realtors or luxury homeowners can afford to absorb such expense, depriving non-luxury homeowners and lower budget Realtors from a valuable marketing tool.

Congress has already proclaimed that it is in the public's interest to integrate commercially flown UAS's into the national airspace system, hence the passing of the Reform Act.

The sUAS, powered by batteries, is smaller, lighter, and more maneuverable than larger aircraft running on combustible fuel, it operates at lower altitudes with no people on board, and will thereby reduce current risk levels and enhance safety and diminish the likelihood of death or serious bodily injury. With a small payload and maximum flight time of only 25 minutes with maximum air speed of 30 knots, there is little or no risk to national security.

Granting StoryView Video, LLC's exemption request furthers the public interest through academic/visual awareness of the geographical benefits in and around the greater Washington D.C. metropolitan area. Our ultra lightweight sUAS is battery powered and creates no emissions that can harm the environment. The consequence of our ultra lightweight sUAS crashing is far less than that of a full size helicopter or fixed wing aircraft which are heavy, contain combustible fuel and can cause catastrophic devastation to the public.

Low-level oblique photos and video from several angles are far more effective than ground based imagery for displaying the characteristics of large, complex properties with several buildings and large trees. In the past, 2-seat full-sized helicopters have been chartered for this purpose, which has proven more costly than many potential clients of this service have been able to afford. The benefits of reduced cost and improved quality of presentation from the sUAS will be valuable to and benefit many buyers and sellers of real property, as well as other potential users and applications.

Additionally, we request that we be allowed to use our system to benefit first responders nearby who might require assistance, including fire fighters, the police, the sheriff, et al., while remaining subject to all limitations cited in this application as we do so.

GENERAL OPERATING STANDARDS

The operation restrictions proposed provide for an equivalent or higher level of safety because operations will further enhance the safety of the persons and/or property using conventional aircraft. The restrictions and conditions to which the applicant agrees to adhere to when conducting commercial operations under the FAA issued exemption as set forth in the Flight Operations Manual (FOM) include:

1. No flight will be made with a sUAS Gross weight exceeding 55 pounds.
2. The sUAS will operate at a maximum speed of no more than 30 knots and no further than 3/4 NM from the PIC.
3. Flights will be operated within visual line of sight (VLOS) of the Pilot in Command (PIC) and/or Visual Observer (VO).
4. Maximum total flight time for each operational flight will be 25 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 25 minute limit.
5. Flights will be operated at an altitude of no more than 400 feet Above Ground Level (AGL) and not more than 200 feet above an elevated platform from which filming is planned.
6. Minimum crew for each operation will consist of the sUAS Pilot and at least one Visual Observer (VO), and may include a third, but separate, Camera Operator (CO).
7. The sUAS pilot will be a designated Pilot in Command (PIC) and meet the requirements of one of the following:
    a. Hold a Private Pilot Certificate with a Third Class Medical Certificate and at least 20 hours of logged sUAS flight time, or be a separate but equivalently sUAS-trained operator under the direct supervision of a Private Pilot. Or,
    b. Pass a knowledge test in order to obtain an FAA-approved drone operator license, and be vetted by the TSA. The PIC will take a recurrent test every 24 months and be at least 17 years old. The PIC will be allowed to fly during daytime hours only and must be able to see the drone at all times (though a second operator can be used as an observer).

(e) The PIC must have accumulated and logged, in a manner consistent with 14 CFR § 61.51 (b), a minimum of 100 flight cycles and 25 hours of total time as a UA rotorcraft pilot and at least ten hours logged as a UA pilot with a similar UA type.

8. A safety briefing will be performed prior to each day's flights consisting of all the days' production activities. It will be mandatory that all personnel who will be performing duties within the boundaries of the safety perimeter be present for this briefing.
9. All flight activities will be logged.
10. All flights will occur under Visual Flight Rules Meteorological Conditions (VMC) only.
11. The flights will occur in Class G airspace, unless otherwise approved by the FAA, and no closer than in a 5-mile radius of the geographic center/Airport Reference Point (ARP) of a tower controlled or uncontrolled airport.
12. If operations will be within a 5-mile radius of the geographic center/Airport Reference Point (ARP) of a tower controlled or uncontrolled airport the respective airports will be contacted advising them of the estimated flight time, flight duration, elevation of flight and other pertinent information.
13. The operator will file FAA Form 7711-1, or its equivalent, as modified in light of the requested exemption, with the appropriate local Flight Standards District Office (FSDO) no more than 72 hours but no less than 48 hours from planned operation.
14. The operator will obtain verbal/written consent of all persons involved with the planned operation and ensure that only consenting persons will be allowed within 100 feet of the flight operation, and the radius may be reduced to 30 feet based upon an equivalent level of safety determination, as U.S. Department of Transportation required under the FOM. With the advanced permission of the FSDO, operations at closer range may be approved.
15. Operations will be restricted to flights over private property with the permission of the property owner.
16. The PIC will brief the VO and property owner about the operation and risk before the first flight at each new location.
17. Written and/or verbal permission from the relevant property holders will be obtained.
18. The sUAS will not be operated over densely populated areas.
19. The sUAS will not be operated at air shows.
20. The sUAS will not be operated over any open-air assembly of people.
21. The sUAS will not be operated over heavily trafficked roads.
22. The PIC and VO will have been trained in operation of sUAS and receive up-to-date information for the particular sUAS to be operated.
23. The PIC and VO will be able to communicate by voice and/or radio at all times during a flight operation.
24. Written and/or verbal permission and permits will be obtained from territorial, state, county or city jurisdictions, including law enforcement, fire or other appropriate governmental agencies as appropriate to flight operations.
25. If the sUAS loses communications with the remote controller or loses GPS signal, the sUAS will have the capability to return to a pre-determined location within a designated location and land autonomously.
26. The sUAS will have the capability to abort a flight in case of unpredicted obstacles, weather, or emergencies such as low battery, safety breaches, or potential danger.
27. Operations will be restricted to day only and weather conditions equivalent to VFR.
28. No flight may be made without a Pre-Flight Inspection by the PIC before each operation

to ascertain that the UA is in a condition safe for flight.
29. The operator will develop procedures to document and maintain a record of the sUAS maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the sUAS.
30. Each sUAS operated under this exemption will comply with all manufacturer safety bulletins, firmware, and software updates.
31. The operator will comply with the manufacturer's recommendations pertaining to maintenance, inspection and replacement of sUAS components.
32. Before conducting operations, the radio frequency spectrum used for operation and control of the sUAS will comply with the Federal Communications Commission (FCC).
33. The sUAS 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.).
34. The sUAS will not operate in Class B, C, or D airspace without written approval from the FAA.
35. The sUAS will not be operated by the PIC from any moving device or vehicle.

The PIC and VO will meet the requirements outlined in FAA Policy N 8900.227 Section 16 personnel Qualifications. Additionally, the PIC will perform maintenance on the system and will complete a course of maintenance instruction as part of the PIC’s initial training.

We submit that the combination of the UA's light weight, flight performance and ability, fully qualified flight crew, and strict operation under the guidelines established in 8900.227, and under all of the Restrictions (1) through (35) listed above, the FAA can have full confidence that the operation will have an equivalent or greater level of safety than manned aircraft performing the same mission.

Given the small size of the sUAS in scope and the controlled environment provided, the proposed operations will adhere to the Reform Act’s safety requirements. The approval of this application presents no national security issues. Regarding the level of safety surrounding the proposed operations and the public benefit, reduction in environmental impacts, including but not limited to reduced emissions and noise, the grant of the requested exemption is in the public interest. Accordingly, the applicant graciously requests that the FAA grant the requested exemption.

We are prepared to modify or amend any part of this request to satisfy the need for an equivalent level of safety. Please contact us at any time if you require additional information or clarification. We look forward to working with your office.

Sincerely ,

Paul Russell
StoryView Video, LLC

Addendum - Exemption Requests and Equivalent Level of Safety
Appendix A - Flight Operations Manual
Appendix B - Phantom 2 User Manual
Appendix C - Phantom 2 Quick Start Guide
Appendix D - Smart Flight Battery Safety Guidelines

ADDENDUM
EXEMPTION REQUESTS AND EQUIVALENT LEVEL OF SAFETY

StoryView Video, LLC, requests an exemption from the following regulations as well as any additional regulations that may technically apply to the operation of the sUAS:

14 CFR Part 21, Subpart H: Airworthiness Certificates.
This part establishes the procedures for the issuance of an airworthiness certificate. While the FAA continues to work to develop airworthiness standards for Unmanned Aerial Systems, we request an experimental certificate be issued for the sUAS under either or both of the following provisions:
21.191 Experimental certificates.
Experimental certificates are issued for the following purposes:
(a) ***Research and development.*** Testing new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft.
(b) ***Showing compliance with regulations.*** Conducting flight tests and other operations to show compliance with the airworthiness regulations including flights to show compliance for issuance of type and supplemental type certificates, flights to substantiate major design changes, and flights to show compliance with the function and reliability requirements of the regulations.

Since the experimental certificate can be used for commercial purposes such as market surveys, sales demonstrations, and customer crew training, we would expect that an experimental certificate would permit our commercial purpose as well.

The aircraft will not carry persons or property, will not carry fuel, and will only fly under strict operational requirements. Combined with the UA's light weight, being constructed primarily of carbon fiber and plastic, we propose that the UA will be at least as safe as, if not safer than, a conventionally certificated aircraft performing the same mission.

If an experimental airworthiness certificate is not appropriate for this application, then we request an exemption of 14 CFR Part 21, Subpart H, and the requirement for an airworthiness certificate in general, citing the equivalent level of safety outlined in the previous paragraph.

14 CFR 45.23 Display of marks; general and 45.29 Size of marks.
These regulations provide that each aircraft must display "N" and the aircraft's registration number in letters at least 3 inches high. Additionally, the aircraft must display the word "EXPERIMENTAL" in letters at least 2 inches high near the entrance to the cabin, cockpit, or pilot station. The UA does not have an entrance in which the word "EXPERIMENTAL" can be placed, and may not have a registration number assigned to it by the FAA.

We propose to achieve an equivalent level of safety by including the word "EXPERIMENTAL" in the placard on the top of the aircraft, as indicated above, where the PIC, VO and others in the vicinity of the aircraft while it is preparing for launch will be able to see the designation. Additionally, we feel that the permanent placard discussed in the previous paragraph will provide the aircraft's registration information at the ground station. Finally, we will display at the ground station a high contrast flag or banner that contains the words "Unmanned Aircraft Ground Station" in letters 3 inches high or greater. Since the aircraft will operate within 3/4 NM of the ground station, the banner should be visible to anyone that observes the aircraft and chooses to investigate its point of origin.

14 CFR 61.113 Private pilot privileges and limitations: Pilot in Command, and 61.133 Commercial pilot privileges and limitations.
The regulation provides that no person that holds a private pilot certificate may act as pilot in command of an aircraft for compensation or hire. Subparagraph (b) allows a private pilot to act as pilot in command of an aircraft in connection with any business or employment if: (1) The flight is only incidental to that business or employment; and (2) The aircraft does not carry passengers or property for compensation or hire.
Our proposed operations require that the PIC must adhere to one of the following:
1. Meet the requirements of 8900.227 para 16(c)(2)(c) "Operations without a pilot certificate" in which the PIC is required to complete "FAA private pilot ground instruction" and pass "the FAA Private Pilot written examination." Since the aircraft cannot carry passengers or property, we feel we meet the intent of 61.113 Subparagraph (b) even though the intent of this application is to conduct a business. Or,
2. Pass a knowledge test in order to obtain an FAA-approved drone operator license, and be vetted by the TSA. The PIC will take a recurrent test every 24 months and be at least 17 years old. The PIC will be allowed to fly during daytime hours only and must be able to see the drone at all times (though a second operator can be used as an observer).

The petitioner asserts that under § 61.113 (a) and (b) private pilots are limited to noncommercial operations, however he can achieve an equivalent level of safety as achieved by current regulations because his sUAS does not carry any pilots or passengers. Further, he states that, while helpful, a pilot license will not ensure remote control piloting skills. He further indicates that the risks of operating a UAS are far less than the risk levels inherent in the commercial activities outlined in 14 CFR part 61, et seq., thus he requests an exemption from § 61.113 Private Pilot Privileges and Limitations: Pilot in command.

Regarding sUAS operational training, the petitioner states he has flown practice flights in remote areas as a hobbyist simulating flights for future commercial use to gain familiarization with the characteristics of his sUAS' performance under different temperature and weather conditions.

14 CFR 91.7 Prohibits the Operation of an aircraft without an airworthiness certificate.
As no such certificate will be applicable in the form contemplated by the FARs, this Regulation

is inapplicable.

14 CFR 91.9 Civil aircraft flight manual, marking, and placard requirements.
This regulation provides that no person may operate an aircraft unless a current, approved flight manual is in the aircraft. We assume that the intent of this requirement is to ensure that flight manual information is available to the aircrew while operating the aircraft. We request an exemption to this requirement since the aircraft is not only too small to carry documentation, but also since the documentation would not be available to the crew during flight operations. To obtain an equivalent level of safety and meet the intent of 91.9, we propose that a current, approved UA Flight Operations Manual (FOM) (Appendix A) must be available to the crew at the ground station anytime the aircraft is in, or preparing for, flight.

14 CFR Part 91.103: Preflight Action.
This regulation requires each pilot in command to take certain actions before flight to ensure the safety of the flight. As FAA approved rotorcraft flight manuals will not be provided for the aircraft, an exemption will be needed. The operating pilot will take all actions as stated in the FOM under normal procedures including but not limited to reviewing the weather, flight battery requirements, landing and takeoff distances, and aircraft performance data before initiation of flight.

14 CFR 91.109 Flight Instruction; Simulated instrument flight and certain flight tests.
The regulation states that "No person may operate a civil aircraft that is being used for flight instruction unless that aircraft has fully functioning dual controls."
The UA System ground-based control station consists of a small hand-held radio transmitter and while it does not offer a second set of "controls", both the student and instructor can, and will, operate the single set of controls simultaneously. With both student and instructor having "hands-on" the controls during flight, we feel that this technique meets the intent 91.109 and provides an equivalent level of safety.

14 CFR 91.119 Minimum safe altitudes: General.
The regulation states that over sparsely populated areas the aircraft cannot be operated closer than 500 feet to any person, vessel, vehicle, or structure.

Since the aircraft will be operating at a maximum of 400 feet AGL, we cannot comply with this requirement.

In order to provide an equivalent level of safety we will only fly over private property with the permission of the owner of the property flown over. The aircraft will not be operated over congested areas or over any open air assembly of persons. The property owner will be briefed on the expected route of flight and the associated risks to persons and property on the ground. The aircraft will be operated at a low altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface. Therefore we

maintain that due to the small size of the UA, the hazard to persons, vehicles and structures is minimal compared to manned aircraft, which should be considered in granting the exemption.

14 CFR 91.121 Altimeter settings.
The regulation requires that aircraft shall maintain cruising altitudes by reference to an altimeter setting available within 100 NM of the aircraft.
The UA will always fly below 400 feet AGL and will not need to maintain cruising altitudes in order to prevent conflict with other aircraft.

14 CFR 91.151 Fuel requirements for flight in VFR conditions.
The regulation provides that no person may begin a flight in an airplane under day-VFR conditions unless there is enough fuel to fly to the first point of intended landing and to fly after that for at least 30 minutes.

We feel the intention of this paragraph is to provide an energy reserve as a safety buffer for delays to landing. The UA is battery operated and the maximum duration of flight from a single battery charge is 25 minutes with a 20% reserve. Since the aircraft will never fly more than ¾ NM from the point of intended landing, a full battery charge at launch will ensure that we meet the reserve energy requirement of this paragraph. We request an exemption to the word "fuel" and ask for an equivalent interpretation with the word "energy".

14 CFR 91.203(a) & (b) Civil aircraft: Certifications required.
The regulation provides that an airworthiness certificate, with the registration number assigned to the aircraft and a registration certificate, must be aboard the aircraft. Additionally, subparagraph (b) provides that the airworthiness certificate be "displayed at the cabin or cockpit entrance so that it is legible to passengers or crew."
At a maximum gross weight of 2.205 pounds, the UA is too small to carry documentation, does not have an entrance, and is not capable of carrying passengers or crew. To obtain an equivalent level of safety and meet the intent of 91.203, we propose that documents deemed appropriate for this aircraft by the FAA will be co-located with the crew at the ground control station and available for inspection upon request. In order to identify the aircraft, we propose that the information found on airworthiness and registration certificates be permanently affixed to the aircraft via placard containing the following information plus the word “EXPERIMENTAL” to satisfy the requirement of 14 CFR 45.23, which follows immediately after the proposed placard description below:
EXPERIMENTAL
Manufacturer: DJI Innovations, Inc.
950 E Baseline Ave. Ste. 210
Apache Junction, AZ 85119
Model: Phantom 2
Serial Number: PH645424765

14 C.F.R. 91.215 ATC transponder and altitude reporting equipment and use.

This regulation states all aircraft operating within 30 nautical miles of class A, B and C airspace must be equipped with automatic pressure altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations. Due to the small size and lifting capabilities of our sUAS we cannot carry a traditional transponder. All of our operations will be under 250' if we are operating within the 30mi reach of a mode c veil.

14 CFR Subpart E (91.401 - 91.417) - Maintenance, Preventive Maintenance, Alterations.
The regulation provides that the operator is primarily responsible for maintaining the aircraft in an airworthy condition, including compliance with part 39 and 43. Paragraphs 91.407 and 91.409 require that the aircraft be "approved for return to service by a person authorized under 43.7" after maintenance and inspection.

It is our intention that the PIC perform maintenance and inspection of the aircraft and "be authorized to approve the aircraft for return to service." As provided in the Pre-Flight Checklist, the PIC will ensure that the aircraft is in an airworthy condition prior to every flight and in addition conduct detailed inspections after every two hours of flight. Maintenance performed by the PIC is limited to repairing small cracks, replacing a propeller, checking electrical connections and updating software and firmware for the on-board computer. All other maintenance will be performed by the manufacturer or their designated repair facility. The PIC will document work performed in accordance with 91.417. We feel that due to the size, construction, and simplicity of the aircraft, the PIC can ensure an equivalent level of safety.

8900.227 Paragraph 16(c)(4) PIC Medical, and Paragraph 16(e)(1) Observer Medical.
This policy provides that both the PIC and VO must have a valid FAA second-class medical certificate issued under part 67 in order to perform as a pilot or observer.

The UA maximum gross weight is 2.205 pounds, it is constructed of carbon fiber and plastic, and the PIC is not on board. Both the PIC and the VO are required to be in VLOS. Given the unlikely event that both the PIC and VO become medically incapacitated while the aircraft is in flight, the UA will return autonomously to the site of launching and land without crew intervention. Therefore, requiring the PIC and VO to meet the same medical requirements as a commercial pilot carrying passengers in a large aircraft is an unnecessary burden.

We propose that the minimum medical requirements for the PIC and VO be vision corrected to 20/20 and a valid, state issued driver's license. The 20/20 vision requirement will ensure that the PIC and VO can see and avoid air traffic; a licensed driver is medically qualified to operate a much larger vehicle.

SUMMARY OF SECTION 333 EXEMPTION REQUEST
For publication in the Federal Register, StoryView Video, LLC hereby provides, pursuant to 14 C.F.R. Part 11, the following summary of its exemption application.

To allow commercial operation of an sUAS for aerial photography and video work including applications and fields such as real estate marketing, architecture, land surveying, engineering, television, public events, cinematography and newsgathering, an exemption is requested from the following regulations:
14 CFR Part 21 subpart H
14 CFR 45.23 (b)
14 CFR 45.29
14 CFR 61.113 (a) & (b)
14 CFR 61.133
14 CFR 91.7 (a)
14 CFR 91.9 (b) (2)
14 CFR 91.103
14 CFR 91.109
14 CFR 91.119
14 CFR 91.121
14 CFR 91.151 (a)
14 CFR 91.203 (a) & (b)
14 C.F.R. 91.205 (b)
14 C.F.R. 91.215
14 CFR 91.405 (a)
14 CFR 91.407 (a) (1)
14 CFR 91.409 (a)(1) and (2)
14 CFR 91.417(a) and (b)
8900.227 Paragraph 16(c)(4) and Paragraph 16(e)(1)

Safety and Benefits of the UAS
StoryView Video, LLC will be using the sUAS in a variety of applications that generally require expensive full-size manned aircraft to complete. Small, light, unmanned aerial vehicles offer myriad benefits over the use of full-sized manned aircraft for applications including but not limited to electric power line inspection, oil/gas pipeline inspection, advanced agriculture, videography, and photography.

Replacing significantly larger manned aircraft carrying crew and flammable fuel with a small UAS carrying no passengers or crew creates a much greater margin of safety for the pilots and crew.

Conclusion
Concluding, the sUAS will not carry persons or property, will not carry fuel, and will only fly under strict operational requirements. Combined with the UA's light weight and it’s primarily carbon fiber and plastic construction, we propose that the UA will be at least as safe, if not safer, than a conventionally certificated aircraft performing the same mission.

By granting StoryView Video, LLC‘s requested exemptions, the FAA will help drive development of safe and successful commercial UAS operations and will advance the public knowledge base for such operations. StoryView Video, LLC is committed to promoting the UAS research efforts of policymakers including the FAA, NASA, DOD and DARPA by sharing data from its commercial UAS operations and serving as a resource for future UAS research operations. Thus, the FAA has good cause to grant this Petition.

As pointed out in this application, all the sUASs which our company would use, under authorization by the US DOT-FAA, are small, light-weight devices operated within the line of sight of the Pilot-in-Command (PIC), less than 400 feet above the ground and outside 5 miles from any airport, heliport, seaplane base, spaceport, or other location with aviation activities, unless the air traffic control authorities (ATC) have been notified and have authorized each flight within a radius of this distance.

All of our sUASs have proven capability for controlled flight. They are devices offered for general sale on the market around the world and have often been used as Model Aircraft in the USA. We are certain that the studies conducted until now by the FAA, about Section 332, Public Law 112-95, 2014, have already provided you with the assurances on the airworthiness of sUASs such as ours.

For the foregoing reasons, the exemptions requested herein should be granted and StoryView Video, LLC should be permitted to conduct small UAS operations in accordance with its manuals and all other operating parameters deemed necessary and appropriate by the FAA. The submission of this application and its contents is the best demonstration that indeed it is possible to pursue the authorization process so that some sUASs may be used for legitimate commercial activities and under reasonably safe conditions.

StoryView Video, LLC seeks an exemption pursuant to 14 C.F.R. and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of its sUAS commercially, without an airworthiness Certificate. By granting this Petition, the FAA Administrator will be fulfilling the Congressional mandate of the FAA Modernization and Reform Act of 2012, while also advancing the interests of the public, by allowing StoryView Video, LLC to safely, efficiently, and economically operate sUASs commercially within the NAS. Wherefore, in accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, StoryView Video, LLC respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections.

APPENDIX A - FLIGHT OPERATIONS MANUAL (FOM)

GENERAL OPERATING STANDARDS

1. No flight will be made with a sUAS Gross weight exceeding 55 pounds.
2. The sUAS will operate at a maximum speed of no more than 30 knots and no further than 3/4 NM from the PIC.
3. Flights will be operated within visual line of sight (VLOS) of the Pilot in Command (PIC) and/or Visual Observer (VO).
4. Maximum total flight time for each operational flight will be 25 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 25 minute limit.
5. Flights will be operated at an altitude of no more than 400 feet Above Ground Level (AGL) and not more than 200 feet above an elevated platform from which filming is planned.
6. Minimum crew for each operation will consist of the sUAS Pilot and at least one Visual Observer (VO), and may include a third, but separate, Camera Operator (CO).
7. The sUAS pilot will be a designated Pilot in Command (PIC) and meet the requirements of one of the following:

   c. Hold a Private Pilot Certificate with a Third Class Medical Certificate and at least 20 hours of logged sUAS flight time, or be a separate but equivalently sUAS-trained operator under the direct supervision of a Private Pilot. Or,
   d. Pass a knowledge test in order to obtain an FAA-approved drone operator license, and be vetted by the TSA. The PIC will take a recurrent test every 24 months and be at least 17 years old. The PIC will be allowed to fly during daytime hours only and must be able to see the drone at all times (though a second operator can be used as an observer).

(e) The PIC must have accumulated and logged, in a manner consistent with 14 CFR § 61.51 (b), a minimum of 100 flight cycles and 25 hours of total time as a UA rotorcraft pilot and at least ten hours logged as a UA pilot with a similar UA type.
8. A safety briefing will be performed prior to each day's flights consisting of all the days' production activities. It will be mandatory that all personnel who will be performing duties within the boundaries of the safety perimeter be present for this briefing.
9. All flight activities will be logged.
10. All flights will occur under Visual Flight Rules Meteorological Conditions (VMC) only.
11. The flights will occur in Class G airspace, unless otherwise approved by the FAA, and no closer than in a 5-mile radius of the geographic center/Airport Reference Point (ARP) of a tower controlled or uncontrolled airport.
12. If operations will be within a 5-mile radius of the geographic center/Airport Reference Point (ARP) of a tower controlled or uncontrolled airport the respective airports will be contacted advising them of the estimated flight time, flight duration, elevation of flight and other pertinent information.
13. The operator will file FAA Form 7711-1, or its equivalent, as modified in light of the requested exemption, with the appropriate local Flight Standards District Office (FSDO) no more than 72 hours but no less than 48 hours from planned operation.

14. The operator will obtain verbal/written consent of all persons involved with the planned operation and ensure that only consenting persons will be allowed within 100 feet of the flight operation, and the radius may be reduced to 30 feet based upon an equivalent level of safety determination, as U.S. Department of Transportation required under the FOM. With the advanced permission of the FSDO, operations at closer range may be approved.
15. Operations will be restricted to flights over private property with the permission of the property owner.
16. The PIC will brief the VO and property owner about the operation and risk before the first flight at each new location.
17. Written and/or verbal permission from the relevant property holders will be obtained.
18. The sUAS will not be operated over densely populated areas.
19. The sUAS will not be operated at air shows.
20. The sUAS will not be operated over any open-air assembly of people.
21. The sUAS will not be operated over heavily trafficked roads.
22. The PIC and VO will have been trained in operation of sUAS and receive up-to-date information for the particular sUAS to be operated.
23. The PIC and VO will be able to communicate by voice and/or radio at all times during a flight operation.
24. Written and/or verbal permission and permits will be obtained from territorial, state, county or city jurisdictions, including law enforcement, fire or other appropriate governmental agencies as appropriate to flight operations.
25. If the sUAS loses communications with the remote controller or loses GPS signal, the sUAS will have the capability to return to a pre-determined location within a designated location and land autonomously.
26. The sUAS will have the capability to abort a flight in case of unpredicted obstacles, weather, or emergencies such as low battery, safety breaches, or potential danger.
27. Operations will be restricted to day only and weather conditions equivalent to VFR.
28. No flight may be made without a Pre-Flight Inspection by the PIC before each operation to ascertain that the UA is in a condition safe for flight.
29. The operator will develop procedures to document and maintain a record of the sUAS maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the sUAS.
30. Each sUAS operated under this exemption will comply with all manufacturer safety bulletins, firmware, and software updates.
31. The operator will comply with the manufacturer's recommendations pertaining to maintenance, inspection and replacement of sUAS components.
32. Before conducting operations, the radio frequency spectrum used for operation and control of the sUAS will comply with the Federal Communications Commission (FCC).
33. The sUAS 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.).
34. The sUAS will not operate in Class B, C, or D airspace without written approval from the FAA.

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

sUAS PRE-FLIGHT CHECKLIST & PROCEDURES

Inspect rotors for shape, cracks, and any signs of loss of integrity.
Inspect / Attach rotors – check rotation direction and nut tension.
Inspect overall vessel for signs of damage and loose connections.
Inspection of motors for smooth, balanced, quiet operation - free of debris.
Check UA main battery – at a minimum of 95% of charge.
Check battery – for clean connections & free of defects, swelling, etc
Define flight plan, take off & objectives.
Check flight plan against designated “No Fly Zone” i.e.,: proximity to Airports, Military, etc.
Check wind and weather – look for signs of unusual wind at higher elevations.
Confirm the designated flying area and confirm with all personnel.
Confirm flying area is clear of all restricted air space requirements.
Confirm your VO and VLOS range and verbal communications to be used.
Check for aerial obstructions – utility wires, etc.
Check all wiring connections for tightness.
Check all external devices are attached securely: gimbal, camera, etc., and each has a safety, ziptie, etc., in case a device comes loose so it does not separate from the vessel.
Check camera lens is clean.
Check camera settings are correct.
Check all control switches are in proper start up position.
Clear and reset flight clock to zero.
Check take off area is clear of objects and persons for 10 ft radius.
Turn on remote controller, check for adequate voltage, set it to connect to the UA.
Turn on the UA main battery, and check for radio contact with UA's remote controller.
If at a location different from previous flight, re-set GPS and compass to current location.
Announce “Stand Clear – We're Powering Up Now!”
Allow the system to complete it's full start up procedure.
Confirm that the system status is flight-ready.
Confirm GPS status, and number of satellites.
Check that battery still indicates operational status at 95% or better
Spin up rotors – listen for any unusual sounds in the system.
Start flight-clock.
Lift off and hover at 4 feet.
Check all status lights on the UV and Controller.
Check that hover is stable (not drifting or erratic).
Check that camera is operational.
Check that all control commands are responsive.
Set current home location for Lost Link: “Return to Home”
Confirm VO readiness, and proceed with the flight plan.

TO REGAIN CONTROL AFTER LOST RADIO CONTACT
1. Failsafe = ON
2. Throttle = 50%
3. Mode = ATTI
4. Failsafe= OFF
Mode = G

*If radio contact is not restored, the UA will automatically continue at 60ft. above its last elevation before losing contact toward its takeoff point, then descend and land there autonomously.