September 22, 2014

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

Re: Exemption Request Pursuant to Section 333 of the FAA Reform Act of 2012

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and C.F.R. Part 11, First Flight Photography LLC, owner and operator of Small Unmanned Aircraft Systems (UASs), request to be exempted from the Federal Aviation Regulations (FARs) listed below so that First Flight Photography may operate UASs commercially in airspace regulated by the Federal Aviation Administration; as 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.

First Flight Aviation LLC, is co-owned by Philip Leone and John Kahrs who are both professional Pilots with Airline Transport Pilot privileges. Both owners have flown for the United States Air Force and major airlines for decades with a combined total of over 17,000 mishap free hours. Philip Leone is a graduate of the Air Force Aircraft Mishap Investigation Course and is a current Chief of Safety in the New York Air National Guard. All UAV operations will be in accordance with First Flight Photography's Standard Operating Procedures (SOPs) or as established by the FAA.

The Name and address of the applicant is:

First Flight Photography, LLC
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Address: 610 Broadway, #353 Newburgh, New York 12550

As described below, the requested exemption would permit the operation of lightweight (less than 55 lbs total take off gross weight) UASs under controlled conditions for commercial use by professional certificated pilots thereby enhancing safety and fulfill 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." Section 333(c) of the Reform Act.

First Flight Photography respectfully requests the grant of an exemption to the following specific sections of the Title 14 Code of federal Regulations allowing it to operate lightweight UAS's for commercial use:

> 14 CFR 21, subpart H, 14 CFR 45.23(b), 14 CFR 91.7(a), 91.9 (b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) &(b), 91.405(a), 91.407(a)(1), 91.409(a)(2), 91.417(a) &(b).

First Flight Photography submits this application in accordance with the Reform Act, 112 P.L. 95 331-334, seeking relief from any currently applicable FAR's operating to prevent First Flight Photography's future commercial use of small UASs to operate in the national airspace system as described below. The Reform Act Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. First Flight Photography's lightweight UASs meet the definition of "small unmanned aircraft" as defined in section 331 and therefore the integration of First Flight Photography's lightweight UASs are expressly contemplated by the Reform Act. First Flight Photography would like to operate its lightweight UASs prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such aircraft.

The Reform Act directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the national airspace system (NAS) before completion of the rulemaking required under Section 332 of the Reform Act. In making this determination, the Secretary is required to determine which types of UASs do not create a hazard to users of the NAS or the public or pose a threat to national security in light of the following:

- The UAS's size, weight, speed and operational capability
- Operation of the UAS in close proximity to airports and populated areas
- Operation of the UAS within visual line of sight of the operator

Reform Act 333 (a). If the secretary determines that such vehicles "may operate safely in the National Airspace System, the Secretary shall establish requirements for the safe operation of such aircraft in the National Airspace System."

First Flight Photography's UASs are rotorcraft weighing less than 55 pounds including payload. They operate at a speed of less than 50knots and have the capability to hover and move in the vertical and horizontal plane simultaneously. The UAS will operate only within the line of sight of the pilot within a protected flight area as described below. Such operations will insure that the UASs will not create a hazard to the users of the national airspace system or the public.

The very small nature of the UASs utilized by First Flight Photography combined with the safety protocols outlined below will allow for a greater than

equivalent level of safety in which Congress envisioned that the FAA must, by exemption allow commercial operations of UASs to commence immediately. Also due to the size of the UASs and the areas and altitudes they will operate, approval of the exemption presents no national security issue and absolutely minimal safety concerns which have been mitigated through a rigorous risk management process. Given the clear direction given 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, the significant public benefit, including enhanced safety, reduced emissions utilizing UASs vice traditional aircraft as well as the economic impact of greatly reducing the cost of aerial photography thereby benefiting the greater public's interest. Accordingly, the applicant requests that the FAA grant the requested exemption without delay.

The following limitations are considered to be binding for the operation of UASs for commercial purposes by First Flight Photography :

1. Flights will be operated in the line-of-sight by a ground based pilot
2. Flights will only occur in the daytime and clear of clouds
3. The UASs will weigh less than 55lbs at take off and during flight
4. Flights will be terminated with 25% of battery life remaining
5. Flights will be operated at an altitude at or below 400' AGL
6. Pilots, camera operators and observers will be trained IAW the applicable portion of the UAS's manual as well as the SOPs.
7. Minimum UAS crew will be one certificated Commercial pilot or higher rating with a current FAA medical. A camera operator and or observer may be added as required to further reduce the possibility of task saturation by the pilot depending on the mission requirements.
8. Pilot, observer and camera operator will maintain real time communication capability throughout flight operations.
9. The UAS Pilot will conduct a full site survey to determine the Area of Responsibility (AOR). This AOR is the actual area for UAS operations for a particular day. Each survey will include the assessment of potential hazards to include but not limited to airspace classification, NOTAMS, temporary flight restrictions, closest airport proximity, natural and man-made obstacles, and unnecessary persons which may pose a risk to operations or safety. If deemed necessary, the crew will employ additional personal as safety observers.
10. First Flight Photography will employ safety observers as well as sign notifications in areas close to public activity.
11. A thorough briefing will be conducted, prior to the first flight of the day in an AOR, utilizing the briefing guide in the SOPs. All persons who will be in the AOR while UAS flights are conducted will be present for this briefing.
12. First Flight Photography will obtain consent (verbal or written) for any persons who need to be within 100 feet of UAS flight operations.

13. Written and or verbal permission from the relevant property owners will be obtained prior to flight.
14. All required permissions and permits will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire or other governmental agencies.
15. If the UAS loses communications or loses its GPS signal, the UAS will have the capability to return to a pre-determined location within the AOR and land autonomously.
16. The UAS will have the ability to abort a flight in case of unpredicted obstacles or emergencies.

14 C.F.R Part 21 Subpart H: Airworthiness Certificates 14 C.F.R. 91.7(a), 91.203 (a)(1)

Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR 91.203(a)(1) The size, weight and defined area of operations for First Flight Photography UAS flights permits exemption from Part 21 because First Flight Photography meets an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the ACT (49 U.S.C. 44701(f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UASs from the airworthiness certificate requirement in consideration of weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. First Flight Photography meets or exceeds each of these elements.

14 C.F.R. 91.203 (a &b) provides for carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons stated above. The equivalent level of safety will be achieved by maintaining such certifications and registrations at First Flight Photography's flight operations center.

14 C.F.R. 91.7(a) 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 C.F.R. 91.9(b)(2) Civil Aircraft Flight Manual in the Aircraft

14 C.F.R. 91.9(b)(2) requires an aircraft flight manual in the aircraft. As there are no pilots of passengers, and given the size of the UASs, this regulation is inapplicable. An equivalent level of safety will be achieved by maintaining an operators manual at the flight operations center. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607,

8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. 91.103(b) Preflight action

14 C.F.R. 91.103 Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include: (b) For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information. This subparagraph is not applicable due to our off airfield operations.

14 C.F.R. 91.109 Flight instruction; Simulated instrument flight and certain flight tests.

14 C.F.R. 91.109 and all the subparagraphs address the operation of a civil manned aircraft in conjunction with training and flight tests. The UAS to be employed by First Flight Photography are not designated in this category.

14 C.F.R. 91.121 Altimeter Settings

14 C.F.R. 91.121 regarding altimeter settings is inapplicable because First Flight Photography UASs utilize GPS systems and internal gyroscopes to provide spatial stability and a reference datum.

14 C.F.R. 91.151 Fuel Requirements for Flight in VFR Conditions

14 C.F.R. 91.151 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 approximately 25 minutes of powered flight which is less than the reserve requirement alone by FARs for day or night VFR flight. Given the limitations on the UAS's flight envelope, proposed AOR size, battery life and its ability to land immediately it is reasonable to allow an exception.

An equivalent level of safety can be achieved by limiting flights to 25% of battery power. This restriction would be more than adequate to return the UAS to its planned landing zone in the AOR.

Similar exemptions have been granted to other operations, including Exemptions 2689F, 5745, 10673 and 10808.

14 C.F.R. 45.23 Marking of the Aircraft

Applicable Codes of Federal regulations require aircraft to be marked according to certain specifications. First Flight Photography UASs are unmanned; do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is impractical to place on such small aircraft. First Flight Photography will, however, place the word "EXPERIMENTAL" on its fuselage as required by 14 C.F.R. 45.29 (f) so that the pilot, camera operator, observer and any other persons operating in the AOR can see the markings on the UAS. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A, and 10700.

14 C.F.R. 91.119 Minimum Safe Altitudes

14 C.F.R. 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. First Flight Photography will only operate its UASs at or below 400 AGL. First Flight Photography will operate its UASs in a defined AOR that has been carefully reviewed for hazards and minimizes the presence of any persons not essential for operations. Flights will only be conducted over private property with consent of the property owner. The equivalent level of safety will be achieved given the size, weight and speed of the UAS as well as the location where it is operated. Compared to flight operations with traditional aircraft or rotorcraft weighing far more than 55lbs, operating below 500 AGL with flammable fuel UAS operations present a far smaller risk.

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 the aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as prescribed 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.

These regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to First Flight Photography UASs should its requested exemption be granted. As an equivalent level of safety First Flight Photography requires its pilots to conduct a preflight, through-flight and post flight inspection of the UAS to ensure it's flight worthiness prior to launch. Each UAS is flown in compliance with the applicable manufactures manual to include all software update cycles as well as flight checklists. In the event of a malfunction the UAS can land immediately.

Privacy

All flights will occur over private or controlled access property with the property owner's prior consent and knowledge.

Summary

First Flight Photography is seeking exemption from the following rules: 14 CFR 21, subpart H, 14 CFR 45.23(b), 14 CFR 91.7(a), 91.9 (b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a)&(b), 91.405(a), 91.407(a)(1), 91.409(a)(2), 91.417(a)&(b).

Approval of the above exemptions allowing commercial operations of small UASs in the service of aerial photography will greatly enhance safety by reducing the overall risk associated with traditional aircraft. Traditional aerial photography requires large aircraft weighing thousands of pounds and carrying hundreds of pound of fuel presenting a significant risk to life and property. With First Flight Photography's use of small UASs weighing less than 55 lbs, powered by batteries and operating at or below 400 AGL they virtually eliminate all of the risk associated with traditional aerial photography. The UASs will carry no people thereby eliminating the exposure to the risks associated with flying while accomplishing the same task in a much safer manner.

Granting First Flight Photography the above exemptions will allow for the expansion of UAS systems into the future, in a professional, safety conscious culture steep in the tradition of Aviation. The safety culture established by the founding members of First Flight Photography based on their first-hand experience as professional aviators who are currently working for a major U.S. Air Carrier as well as the United States military are invaluable for laying the proper foundation into this vast new chapter of aviation history.

First Flight Photography respectfully requests that the FAA grant its exception without delay. The FAA has the authority to issue the exemption sought by First Flight Photography pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

Sincerely,

Philip J. Leone
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