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

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

July 10, 2015

Exemption No. 11399A
Regulatory Docket No. FAA-2015-0147

Mr. Philip A. K. Stiles, Esquire
President and General Counsel
GPS Development, LLC dba SkyViewHD
275 Eagle Knob Pointe
Lake Mary, FL 32746

Dear Mr. Stiles:

This letter is to inform you that we have granted your petition for an amendment. It explains the basis for our decision, describes its effect, and lists any changes to the original conditions and limitations.

By letter dated May 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of GPS Development, LLC dba SkyViewHD (hereinafter petitioner or operator) for an amendment to your current exemption. That exemption from §§ 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) of Title 14, Code of Federal Regulations (14 CFR) allows the petitioner to operate a UAS to perform aerial data collection[1]. You requested an amendment to add the DJI Phantom 2 Vision +, DJI Phantom 3, DJI S1000, and BirdsEyeView Firefly 6.

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner. The unmanned aircraft(s) authorized in the original grant are comparable in type, size, weight, speed and operating capabilities to those in this petition.

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[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.

Airworthiness Certification

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, C*ertification procedures for products and parts, Subpart H—Airworthiness Certificates,* and any associated noise certification and testing requirements of part 36, is not necessary.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 11399 remains valid and is in the public interest. Therefore, under the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, the operator is granted an amendment to add new aircraft to its UAS operations.

The operator shall add this amendment to its original exemption.

Conditions and Limitations

All conditions and limitations within Grant of Exemption No. 11399 remain in effect except as follows. Condition No. 1 has been updated to reflect the additional aircraft.

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, DJI Phantom 2 Vision +, DJI Phantom 3, DJI S1000, and BirdsEyeView Firefly 6 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.

This exemption terminates on April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

John S. Duncan
Director, Flight Standards Service

GPS Development, LLC
d/b/a SkyViewHD™
429 S. Keller Rd., Suite 310
Orlando, FL 32810

May 2, 2015

Mr. James Williams
Manager, Flight Standards Service
Unmanned Aircraft Systems Integration Office
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591

and

U. S. Department of Transportation
Docket Management System
1200 New Jersey Avenue SE
Washington, DC 20590

Re: Exemption Request Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from 14 C.F.R. 45.23(b);14 CFR Part 21;14 CFR 61.113 (a) & (b); 13 C.F.R. 61.133(a); 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).

Dear Mr. Williams and the U. S. Department of Transportation:

On April 20, 2015, the Federal Aviation Administration ("**FAA**") granted GPS Development, LLC d/b/a SkyViewHD™ ("**SkyViewHD**") with an exemption from the Federal

Aviation Regulations ("**FARs**") - Exemption No. 11399, Regulatory Docket No. FAA–2015–0147. The prior exemption was granted with no posted comments or questions from the FAA.

SkyViewHD is committed to meticulously working through the exemption process in order to provide the FAA with an application which is not only thorough and comprehensive but demonstrates SkyViewHD's professional approach to a very unique industry and we appreciate this opportunity to submit an additional exemption application for your consideration.

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and 14 C.F.R. Part 11, GPS Development, LLC d/b/a SkyViewHD, the developer and operator of the Small Unmanned Aircraft System ("**UA**"), seeks an additional exemption from the FARs as listed and discussed below.

SkyViewHD's UAs perform precision surveying, inspections, videography, photography, and training in order to provide services for the following which shall include but not be limited to: real estate, agriculture, mining, cellular towers, oil and gas flare stacks, power lines, transmission towers, bridges, dams, general infrastructure inspection, other structures, and other forms of aerial data and imagery collection ("**purposes**"). The use of SkyViewHD's UAs for these purposes reduces the need to operate conventional aircraft, typically needed to perform these types of operations, provides an economic benefit to the business consumer as the SkyViewHD UA provides higher quality imagery at a fraction of the cost of surveys using conventional aircraft. These savings result in not only enhanced efficiency and productivity for the affected activities but added environmental and safety benefits to the public at large.

For the purposes outlined above, and as more fully described below, SkyViewHD's requested exemption would authorize commercial operations, using SkyViewHD's UAs, which will be operated under controlled conditions at an altitude of no greater than four hundred (400) feet AGL in airspace that is limited in scope and will have automated control features. As outlined below, the airspace in which SkyViewHD's UAs will operate within will be disclosed to the FAA in advance to flight operation. Finally, SkyViewHD's UAs will be used in lieu of comparatively hazardous operations now conducted with fixed wing and rotary conventional aircraft which should reassure the FAA that these operations will achieve at least an equivalent level or greater level of safety. The types of aircraft SkyViewHD anticipates utilizing in order to provide the purposes includes: DJI Inspire 1, DJI Phantom 2, DJI Phantom 2 Vision Plus, DJI Phantom 3, DJI S-1000, and BirdsEyeView FireFLY6.

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In the interest of economic efficiency and public safety, SkyViewHD hereby respectfully applies for an exemption from the listed FARs to allow commercial operations of SkyViewHD's UAs, 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. Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's (the FAA Administrator's) responsibilities under Section 333(c) of the Reform Act to "establish requirements for the safe operation of such aircraft systems in the national airspace system."

As discussed above and more fully described below, the requested exemption would permit the operation of small, unmanned and relatively inexpensive UAs under controlled conditions in airspace that is limited and predetermined. Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's ("**Administrator**") responsibilities to "…establish requirements for the safe operation of such aircraft systems in the national airspace system." *See* Section 333(c) of the Reform Act.

The name and address of the applicant is:

GPS Development, LLC d/b/a SkyViewHD
Attn: Philip A. K. Stiles, Esquire
President and General Counsel
429 S. Keller Road
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Orlando, FL 32810
407-478-7958

REGULATIONS FROM WHICH THE EXEMPTION IS REQUESTED

14 C.F.R. Part 21
14 C.F.R. 45.23(b)
14 C.F.R. 61.113(a) & (b)
13 C.F.R. 61.133(a)
14 C.F.R. 91.7(a)
14 C.F.R. 91.9(b)(2)
14 C.F.R. 91.103
14 C.F.R. 91.109
14 C.F. R. 91.119

14 C.F.R. 91.121
14 C.F.R. 91.151(a)
14 C.F.R. 91.203(a) & (b)
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)

This exemption application is expressly submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law 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 333 of the Reform Act. In making this determination, the Secretary is required to determine which types of UAs 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 UA's size, weight, speed, and operational capability;
- Operation of the UAs in close proximity to airports and populated areas; and
- Operation of the UAs within visual line of sight ("**VLOS**") of the operator.

Reform Act § 333 (a).

Lastly, 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." Id. §333(c) (emphasis added).

The Federal Aviation Act expressly grants the FAA the authority to issue exemptions. This statutory authority by its terms includes exempting civil aircraft, as the term is defined under §40101 of the Act, that includes UAs, from the requirement that all civil aircraft must have a current airworthiness certificate.

The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any sections 44702-44716 of this title if the Administrator finds the exemption in the public interest. 49 U.S.C. §44701(f). *See also* 49 USC §44711(a); 49 USC §44704; 14 CFR §91.203 (a) (1).

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SkyViewHD's UAs are rotorcraft and fixed wing aircraft weighing less than fifty-five (55) pounds (25 Kg) including energy source(s), equipment and any payload. They operate, under normal conditions at a ground speed of no more than eighty-seven (87) knots (100 miles per hour) and have the capability to hover, and move in the vertical and horizontal plane simultaneously. They will operate only in line of sight and will operate only within the area described in the SkyViewHD's Flight Operations Procedure Manual ("**FOPM**") which has been attached as **Exhibit "1"** and is incorporated herein by reference. Such operations will insure that the UA will "not create a hazard to users of the national airspace system or the public."[1]

Given the small size of the UAs involved and the restricted sterile environment within which they will operate, SkyViewHD 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 UAs to commence immediately. Also due to the size of the UAs and the restricted areas in which the relevant UAs 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 the significant public benefit, including enhanced safety, reduction in environmental impacts, including reduced emissions associated with allowing UAs for aerial photography operations, the grant of the requested exemptions is in the public interest. Additionally, there is economic efficiency created with the use of SkyViewHD's UAs as the typical cost to perform aerial photography with helicopters and airplanes heavily multiplies the cost to business consumers and government agencies, including law enforcement, for the services which are to be provided by SkyViewHD.

Accordingly, SkyViewHD respectfully requests that the FAA grant the requested exemption without delay.

AIRCRAFT AND EQUIVALENT LEVEL OF SAFETY

SkyViewHD 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 operations conducted with conventional aircraft.

[1] Reform Act Section 333 (b).

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These limitations and conditions to which SkyViewHD agrees to be bound when conducting all operations under an FAA issued exemption include:

1. The UAs will weigh less than fifty-five (55) pounds (25 Kg).

2. Maximum total flight time for each operational flight will be two (2) hours. Flights will be terminated at twenty-five percent (25%) battery power reserve should that occur prior to the two (2) hour time limit.

3. Flights will be operated at an altitude of no more than four-hundred (400) feet AGL.

4. SkyViewHD's UAs may not be operated at a speed exceeding eighty-seven (87) knots (100 miles per hour) and may use either groundspeed or calibrated airspeed to determine compliance with the eighty-seven (87) knot (100 miles per hour) speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

5. Minimum crew for each operation will consist of the UA Pilot and a Visual Observer ("**VO**").

6. 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 Colombia, 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.

7. The UA Pilot will be Pilot in Command (**PIC**).

8. The UAs will only operate within an area as defined in the FOPM.

9. A briefing will be conducted with regard to the planned UA operations prior to flight operations. It will be mandatory that all personnel who will be performing duties with regard to the flight operations be present for this briefing.

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10. SkyViewHD will obtain the consent of all persons involved in the purposes outlined above (or similar operations).

11. The PIC and VO will have been trained in operation of UAs generally and received up-to-date information on the particular UA to be operated and the UA will be operated in conformity with SkyViewHD's FOPM.

12. The PIC and VO will at all times be able to communicate via voice communication.

13. Written and/or oral permission from the relevant property holder(s), or their authorized representative(s), will be obtained.

14. All required permissions and permits will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.

15. If the UA loses communications or loses its GPS signal, the UA will return to the launch site of the UA, or another more appropriate site, and land.

16. The UA will have the capability 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. §91.203 (A) (1)

Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR §91.203 (a) (1). Given the size and limited operating area associated with the aircraft to be utilized by SkyViewHD, an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C.§44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UA. In all cases, an analysis of these criteria demonstrates that the UA operated without an airworthiness certificate, in the restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional

aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

The UAs to be operated hereunder is less than fifty-five (55) pounds (25 Kg) fully loaded, carries neither a pilot nor passenger, carries no explosive materials or flammable liquid fuels, and operates exclusively within a secured area as set out in the FOPM. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator, pursuant to the FOPM's requirements, and under the requirements and in compliance with local public safety requirements, to provide security for the area of operation as is now done with conventional aerial photography. The FAA will have advance notice of all operations. These safety enhancements, which already apply to civil aircraft operated in connection with motion picture and television production, provide a greater degree of safety to the public and property owners than conventional operations conducted with airworthiness certificates issued under 14 C.F.R. Part 21, Subpart H. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the UAs, due to its size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load.

14 C.F.R. § 45.23 (B). MARKING OF THE AIRCRAFT

The regulation requires:

> When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

Even though the UAs will have no airworthiness certificate, an exemption may be needed as the UAs will have no entrance to the cabin, cockpit or pilot station on which the words "limited," "restricted," "light-sport," "experimental," or "provisional," may be placed. Given the size of the UAs, two-inch lettering will be impossible. The word "experimental," or any other term as is so required, will be placed on the fuselage of the UAs in compliance with §45.29 (f).

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The equivalent level of safety will be provided by having the UAs marked on its fuselage as required by §45.29 (f) where the pilot, observer and others working with the UAs will see the identification of the UAs as "Experimental." The FAA has issued the following exemptions to this regulation to Exemptions Nos. 10700, 8738, 10167 and 10167A.

14 C.F.R. § 61.113 (A) & (B): PRIVATE PILOT PRIVILEGES AND LIMITATIONS: PILOT IN COMMAND

14 C.F.R. § 61.113(A) & (B); 61.133(A): PRIVATE PILOT PRIVILEGES ANDLIMITATIONS; PILOT IN COMMAND; COMMERCIAL PILOT PRIVILEGES AND LIMITATIONS.

Section 61.113(a) & (b) limit private pilots to non-commercial operations. Unlike a conventional aircraft that carries a pilot, passengers, and cargo, the UA in this case is remotely controlled with no passengers or property of others on board. Section 61.133(a) requires an individual with a commercial pilot's license to be pilot in command of an aircraft for compensation or hire. SkyViewHD respectfully proposes that operator requirements should take into account the characteristics of the particular UA.

The FAA has noted the following in the previously granted exemption number 11192:

> "Regarding the petitioner's requested relief from 14 CFR § 61.113 Private pilot privileges and limitations, the FAA must consider the appropriate level of pilot certification for the petitioner's proposed operations. The petitioner states it would operate its UAS with a pilot holding a sport pilot certificate or a recreational pilot certificate and certified by the UA manufacturer and has completed the FAA private pilot's written exam. Under current regulations, civil operations for compensation or hire require a PIC holding a commercial pilot certificate per 14 CFR part 61. As established in 14 CFR § 61.113(a), with limited exception, a pilot holding a private pilot certificate cannot act as a PIC of an aircraft for compensation or hire. However, in Grant of Exemption No. 11062 to Astraeus Aerial (Astraeus), the FAA determined that a PIC with a private pilot certificate operating the Astraeus UAS would not adversely affect operations in the NAS or present a hazard to persons or property on the ground. Additionally, as previously determined by the Secretary of Transportation, the requirement to have an airman certificate ameliorates security concerns over civil UAS operations conducted in accordance with Section 333."

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14 C.F.R. §91.7(A): CIVIL AIRCRAFT AIRWORTHINESS

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft and the requirements contained in the FOPM for maintenance and use of safety check lists prior to each flight.

14 C.F.R. § 91.9 (B) (2): CIVIL AIRCRAFT FLIGHT MANUAL IN THE AIRCRAFT

Section 91.9 (b) (2) provides:

> No person may operate a U.S. registered civil aircraft …
>
> (2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

The UAs, given their size and configuration has no ability or place to carry such a flight manual on the aircraft, not only because there is no pilot on board, but because there is no room or capacity to carry such an item on the aircraft.

The equivalent level of safety will be maintained by keeping the FOPM at the ground control point where the pilot flying the UAs will have immediate access to it. The FAA has issued the following exemptions to this regulation: Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 32827, and 10700.

14 C.F.R. § 91.103: PREFLIGHT ACTION

This regulation requires each pilot in command to take certain actions before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be provided for the aircraft an exemption will be needed. An equivalent level of safety will be provided as set forth in the FOPM. The PIC will take all actions including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data before initiation of flight.

14 C.F.R. §91.109: FLIGHT INSTRUCTION

Section 91.109 provides that no person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls.

UAs and remotely piloted aircraft, by their design do not have fully functional dual controls. Flight control is accomplished through the use of a control box that communicates with the aircraft via radio communications. The FAA has approved exemptions for flight training without fully functional dual controls for a number of aircraft and for flight instruction in experimental aircraft. See Exemption Nos. 5778K & 9862A. The equivalent level of safety is provided as neither a pilot nor passengers will be carried in the aircraft and by the size and speed of the aircraft.

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 UAs that are a helicopter and the exemption requests authority to operate at altitudes up to four-hundred (400) feet AGL, or not more than two-hundred (200) above an elevated platform from which aerial photography is planned, an exemption may be needed to allow such operations. As set forth herein, except for the limited conditions stated in the FOPM, the UAS will never operate at higher than four-hundred (400) feet AGL. It will however be operated in a restricted area with security perimeter, 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(s), or their authorized representative(s), all affected individuals will be aware of the planned flight operations as set forth in the FOPM. Compared to flight operations with aircraft or rotorcraft weighing far in excess of the less then fifty-five (55) pounds (25 Kg) limit 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 five-hundred (500) feet AGL. 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. §91.121 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 UA 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 FOPM and Safety Check list, 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."

SkyViewHD believes that an exemption from 14 CFR §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 thirty (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 UA flights to ten (10) minutes would greatly reduce the utility and economic efficiency for which the exemption will be granted.

SkyViewHD believes that an equivalent level of safety can be achieved by limiting flights to two (2) hours or twenty-five percent (25%) of battery power whichever happens first. This restriction would be more than adequate to return the UAs to their planned landing zone from anywhere in its limited operating area.

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

14 C.F.R. §91.203 (A) AND (B): CARRYING CIVIL AIRCRAFT CERTIFICATION AND REGISTRATION

The regulation provides in pertinent part:

> (a) Except as provided in § 91.715, no person may operate a civil aircraft unless it has within it the following:
>
> (1) An appropriate and current airworthiness certificate. . . .
>
> (b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

The UAs fully loaded weight is no greater than fifty-five (55) pounds (25 Kg) and is operated without an onboard pilot. As such, there is no ability or place to carry certification and registration documents or to display them on the UA.

An equivalent level of safety will be achieved by keeping these documents at the ground control point where the pilot flying the UA will have immediate access to them to the extent they are applicable to the UA. The FAA has issued numerous exemptions to this regulation. A representative sample of other exceptions includes Exemption Nos. 9565, 9665, 9789, 9789A, 9797, 9797A, 9816A, and 10700.

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 section and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to SkyViewHD. Maintenance will be accomplished by the operator pursuant to the flight manual and operating handbook as referenced in the FOPM. An equivalent

level of safety will be achieved because these small UAs 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 may land immediately and will be operating from no higher than four-hundred (400) feet AGL. As provided in the FOPM, the operator will ensure that the UAs are in working order prior to initiating flight, perform required maintenance, and 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.

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

> SkyViewHD seeks an exemption from the following rules:
> 14 C.F.R. §21, subpart H; 14 C.F.R 45.23(b);14 C.F.R. §§ 61.113(a) & (b);91.7 (a); 91.9 (b) (2);91.103(b);91.109; 91.119; 91.121; 91.151(a);91.203(a) and (b); 91.405 (a); 91.407 (a) (1); 91.409 (a) (2); 91.409 (a) (2) and 91.417 (a) & (b) to operate commercially a small unmanned vehicle weighing less than fifty-five (55) pounds (25 Kg) in its operations.

Approval of exemptions allowing commercial operations of UAs for the operational purposes outlined above, or similar operations, will enhance safety by reducing risk. Typically, these types of operations are performed using jet or piston power aircraft. These aircraft operate at extremely low altitudes just feet from the object being photographed and often in extreme proximity to people and structures. They also present heightened risks associated with vehicles that weigh in the neighborhood of four thousand (4,000) pounds, carrying large amounts of jet A or other fuel (one hundred and forty (140) gallons for jet helicopters). Not only is there danger created using these types of aircraft during operations, such aircraft must fly to and from the site's location. In contrast, a UA weighing less than fifty-five (55) pounds and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The UA is carried to the site of the purposes outlined above (or similar operations) and not flown to the site. The UA will carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights.

The operation of small UAs, weighing less than fifty-five (55) pounds, conducted in the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein, including exempting SkyViewHD from the requirements of Part

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21 and allowing commercial operations. 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.

PRIVACY

All flights will occur over private, controlled or approved property with the property owner's, or their authorized representative, prior consent and knowledge. The aerial photography will be of structures and objects whose owner, or authorized representative, has consented to the aerial photography. The grant of this exemption request will provide improved safety in operations.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 - size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight and national security – provide more than adequate justification for the granting of the requested exemptions allowing commercial operation of SkyViewHD's UAs pursuant to the FOPM attached hereto.

SUMMARY OF SKYVIEWHD'S REQUEST FOR AN FAA EXEMPTION

1. Operations authorized by this a grant of exemption will be limited to the requested aircraft when weighing less than fifty-five (55) pounds including payload.

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 eighty-seven (87) knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the eighty-seven (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 four-hundred (400) feet above ground level (AGL) and the 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, 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 UA 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 five-hundred (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 UA 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 UA 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 UA, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UA is found to be in a condition for safe flight.

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

12. Each UA 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 Colombia, 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. UA 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 five (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 Certificate of Waiver and Authorization ("**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 five-hundred (500) feet below or less than two-thousand (2,000) feet horizontally from a cloud or when visibility is less than three (3) statute miles from the PIC.

18. If the UA 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. 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.

22. 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.

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

24. The UA may not be operated by the PIC from any moving device or vehicle.

25. All Flight operations must be conducted at least five-hundred (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 five-hundred (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.

26. 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.

27. 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 twenty-four (24) hours. Accidents must be reported to the National Transportation Safety Board ("**NTSB**") per instructions contained on the NTSB Web site: www.ntsb.gov.

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

SkyViewHD respectfully requests the FAA grant an exemption pursuant to this application.

Sincerely,

Philip A. K. Stiles, Esq.
President and General Counsel
GPS Development, LLC d/b/a SkyViewHD

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