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# McKenna Long & Aldridge<sup>LLP</sup>

1676 International Drive • Penthouse  
McLean, VA 22102  
Tel: 703.336.8800  
mckennalong.com

Northern Virginia  
Orange County  
Rancho Santa Fe  
San Diego  
San Francisco  
Seoul  
Washington, DC

MARK E. MCKINNON  
703.336.8708

EMAIL ADDRESS  
mmckinnonf@mckennalong.com

October 14, 2014

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

Re: Petition of Perfect View Aerial Media, LLC for an Exemption Pursuant to  
Section 333 of the FAA Modernization and Reform Act of 2012

Dear Gentlemen:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("Reform Act") and 14 C.F.R. Part 11, Perfect View Aerial Media, LLC ("Perfect View"), hereby applies for an exemption from the Federal Aviation Regulations ("FARs") identified below, to allow commercial operations of small unmanned aerial vehicles (*i.e.*, "small unmanned aircraft" or "UAS").

This exemption is made based on the information in this petition, as well as the accompanying Perfect View Operations and Safety Manual ("Operations Manual") and the DJI S-1000 flight and maintenance manuals. Petitioner submits this supporting material as confidential documents under 14 C.F.R. § 11.35(b), as they contain confidential commercial and proprietary information that the Petitioner has not and will not share with others. Similarly, these documents contain operating conditions and procedures that are not available to the public and are protected from release under the Freedom of Information Act, 5 U.S.C. § 552 *et seq.*, and any other requirements established by the FAA pursuant to Section 333 of the FAA Reform Act.

For your convenience, the petition is organized as follows:

- I. Description of Petitioner**
- II. Relevant Statutory Authority**
- III. Perfect View Aerial Media's Proposed UAS Operations Meet The Requirements Of Section 333 Of The Reform Act**

**IV. Regulations From Which Exemption is Requested**

- A. 14 C.F.R. Part 21, Subpart H – Airworthiness Certificates and 14 C.F.R. § 91.203**
- B. 14 C.F.R. Part 27 Airworthiness Standards: Normal Category Rotorcraft**
- C. 14 C.F.R. §§ 91.9(c), 45.23(b) and 45.27(a): Aircraft Marking and Identification Requirements**
- D. 14 C.F.R. § 91.9(b)(2): Civil Aircraft Flight Manual in the Aircraft and 14 C.F.R. § 91.203(a) and (b): Carrying Civil Aircraft Certification and Registration**
- E. 14 C.F.R. § 91.7(a): Civil Aircraft Airworthiness**
- F. 14 C.F.R. § 91.103: Preflight Action**
- G. 14 C.F.R. § 91.109(a): Flight Instruction**
- H. 14 C.F.R. § 91.119: Minimum Safe Altitudes**
- I. 14 C.F.R. § 91.121: Altimeter Settings**
- J. 14 C.F.R. § 91.151(a): Fuel Requirements for Flight in VFR Conditions**
- K. 14 C.F.R. § 91.405(a), 91.407(a)(1), 91.409(a)(2); 91.417(a) and (b): Maintenance Inspections**
- L. 14 CFR § 61.113**

**V. Drug and Alcohol Program**

**VI. Public Interest**

**VII. Privacy**

**VIII. Federal Register Summary**

**IX. Conclusion**

**I. DESCRIPTION OF PETITIONER**

Perfect View seeks the requested exemptions to permit it to offer thermal and optical imaging and inspections of electric power infrastructure. In addition, Perfect View seeks authority to conduct flights for training and maintenance purposes in a sterile area free from hazards and persons.

Perfect View has adopted a philosophy that recognizes that UAS operations are a part of the complex, interconnected systems that make up the national airspace (NAS). In addition, Perfect View personnel have longstanding experience in conducting electric power infrastructure inspections and are well aware of the special safety issues that arise from working in this environment. The Perfect View Team consists of Professional Electrical Engineers, Electrical Operations Managers, FAA Licensed Pilots, Certified Thermographers and professional photographers.

The delivery of reliable electrical power and other utility services is essential in our demanding technological world. Manufacturers operating 24/7 depend on it to remain profitable, as do commercial enterprises at all levels. It is critical in everyday life, at home, on the road, in business and for public safety. That is why the most successful utility companies take every precaution to prevent sudden outages, and why thermal imaging has become a core predictive maintenance tool in their ongoing inspection programs. They depend on thermal imaging for intensive regular substation surveys as well as quick safety checks of energized equipment before beginning maintenance work. This helps utilities avoid costly service interruptions and exorbitant equipment losses. Deregulation in the electric utility industry in a number of states prompted utilities to become more cost-competitive, leading to the outsourcing of infrastructure work to contractors who could do the job more efficiently. Moreover, much of the transmission and distribution infrastructure in the United States is aging and in need of repair or replacement.

The Perfect View team has developed a system that incorporates the better of two emerging technologies: remotely piloted aerial systems and thermal imaging. Perfect View has developed operating practices to provide customers with a safe, low cost, comprehensive aerial inspection program, including:

- Substation Aerial Thermal
- Overhead Power Line Video and photographic vegetation growth inspections
- Overhead Power Line components Thermal inspections
- Post Storm damage assessment
- Live video Streaming (Thermal and HD)

The Perfect View team consists of individuals who have been active members of the UAS hobbyists community and have a combined experience of over 40 years operating small UAS. As a result, they have a keen awareness of issues affecting the safe use of UAS and the importance of thorough planning for both normal operations and for contingencies that might affect the safety of flight.

The contact information for Petitioner is as follows:

Perfect View Aerial Media, LLC  
Attn: Ben Richardson  
7379 Lions Gate Rd.  
Suite 108  
Coconut Creek, FL 33073  
email:info@pvam.net

## **II. RELEVANT STATUTORY AUTHORITY**

This petition for exemption is submitted in accordance with the Section 333(a) through (c) of the FAA Modernization and Reform Act of 2012. Congress has directed the FAA "to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system." Pursuant to Section 333 of the Reform Act, the FAA Administrator is to permit unmanned aircraft systems to operate in the National Airspace System ("NAS") where it is safe to do so based on the following considerations:

- The UAS'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 the visual line of sight of the operator.<sup>1</sup>

Additionally, the FAA Administrator has general authority to grant exemptions from its safety regulations and minimum standards when the Administrator decides a requested exemption is in the public interest. *See* 49 U.S.C. § 106(f) (defining the authority of the Administrator); 49 U.S.C. § 44701(f) (permitting exemptions from §§ 44701(a), (b) and §§ 44702 – 44716, *et seq.*). A party requesting an exemption must explain the reasons why the exemption: (1) would benefit the public as a whole, and (2) would not adversely affect safety (or how it would provide a level of safety at least equal to the existing rules). *See* 14 C.F.R. § 11.81 (petitions for exemption).

### **III. PERFECT VIEW AERIAL MEDIA'S PROPOSED UAS OPERATIONS MEET THE REQUIREMENTS OF SECTION 333 OF THE REFORM ACT**

The proposed operations in this petition for exemption qualify for expedited approval under Section 333 of the Reform Act. Each of the statutory criteria and other relevant factors are satisfied.

#### **A. Approval is Warranted Based on the UAS's Size, Weight, Speed, and Operational Capability**

Perfect View will employ the DJI S-1000 octocopter for its electric infrastructure inspection operations. This UAS has a maximum take-off weight of 24 pounds. The UAS's flight speed will not exceed 30 miles per hour, and it will not be flown in controlled airspace or at an altitude that exceeds 400 feet AGL. All flights will be flown in such a way that they can be

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<sup>1</sup> *Id.* at § 333(b)(1).

safely terminated with a reserve battery power of 25% maximum charge. The DJI S-1000 does not carry any flammable propellant or fuel.

The DJI S-1000 also has redundant motor capabilities, and the vehicle is still capable of flight in the event a motor fails unexpectedly. The vehicle is capable of compensating for an engine loss automatically, and action is not required by the PIC.

The DJI S-1000 also has features that can alert the PIC to the possibility of a lost link before it occurs. Because the video link is at a shorter wavelength than the control links, it is more susceptible to loss than the control link. Loss of the video signal warns the PIC that action should be taken to ensure continued control. In the event the control link is lost, the UAS is also equipped with a failsafe setting that permits the vehicle to return to a preselected home point.

In the absence of a UAS, many of these inspections would have to be carried out by a helicopter or by sending someone up to perform the inspection manually. Utility inspections by helicopter are carried out at speed up to 70 knots, and the risk of a wire strike or other collision is much greater than with the UAS. See Helicopter Assoc. Int'l, Utilities, Patrol and Construction Safety Guide for Helicopter Operators at 2-1. Moreover, conducting helicopter inspections at certain locations, such as substations where several transmission lines converge, carry additional risks to helicopters. Id. at 3-3. It should also be kept in mind that, due to the low altitude of power line inspection flights, the ability of a helicopter pilot to successfully conduct an autorotation in the event of an engine failure may be limited or impossible. Id. at 2-3. For example, in 2009, the crew of a helicopter and a pedestrian on a sidewalk were killed when a helicopter conducting a power line inspection suffered an engine failure and could not autorotate successfully. <http://www.tsb.gc.ca/eng/rapports-reports/aviation/2008/a08p0125/a08p0125.pdf>.

Given the small size of the selected UAS and the restricted environment within which they will operate, this petition for exemption falls within the zone of safety, *i.e.*, an equivalent level of safety, in which Congress directed the FAA to permit commercial UAS operations by exemption pending completion of formal rulemaking.

#### **B. Approval is Warranted Based on the Operational Restrictions Set Forth in the Operations Manual**

The Perfect View Operations Manual and manufacturer's maintenance and flight manuals contain all of the procedures and limitations necessary to successfully perform inspection of power infrastructure. To assist the FAA in its safety assessment of Perfect View's operations, below is a summary of operational limitations and conditions which will ensure an equivalent or higher level of safety for operations conducted under current regulatory guidelines:

1. The UAS will weigh 24 pounds or less.
2. Flights will be operated within line of sight of a pilot and observer.
3. Maximum total flight time for each operational flight will be limited to the amount of time the UAS can be flown and still maintain a reserve battery power of no less than 25%.
4. Flights will be operated at an altitude of no more than 400 feet AGL and will not be conducted within navigable airspace.
5. Flights will be operated at a lateral distance of least 200 feet from any inhabited structures, buildings, vehicles or vessels, or from people not associated with the operation who have not given permission in advance of the operation.
6. Minimum crew for each operation will consist of the UAS Pilot, one or more Visual Observers as necessary to safely conduct the mission, and a Sensor Operator if required.
7. The Pilot will have a private pilot's license and is required to complete 64 hours of training and instruction prior to any flight in accordance with the training syllabus attached to the Operations Manual.
8. The observer designated for any operation will be required to complete the training course as set forth in the Operations Manual before performing his duties on any flight.
9. The UAS will operate in accordance with the safety and operational requirements of the Manual.
10. Prior to the operation, a Mission Plan will be created setting forth the limitations for the flight as well as contact and hazard information provided by the utility.
11. A NOTAM will be issued not more than 72 hours in advance of flight, but not less than 48 hours before flight.
12. Pilot, Visual Observer and Sensor Operator will at all times be able to communicate by voice.
13. A Certificate of Authorization 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 appropriate governmental agencies.
15. The operator will coordinate all flights with the appropriate Flight Standards District Office.
16. 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 operational area and land.
17. Contingency plans will be in place to safely terminate flight if there is a loss of communication between the pilot and the observer.
18. The UAS will have the capability to abort a flight in case of unpredicted obstacles or emergencies.

#### **IV. REGULATIONS FROM WHICH EXEMPTION IS REQUESTED**

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, including UASs, from its safety regulations and minimum standards when the Administrator decides a requested exemption is in the public interest.<sup>2</sup>

Petitioner seeks an exemption from several interrelated provisions of 14 C.F.R. Parts 21, 45, 61 and 91 for purposes of conducting the requested operations using a UAS. Listed below are (1) the specific sections of 14 C.F.R. for which exemption is sought, and (2) the operating procedures and safeguards that Petitioner has established which will ensure a level of safety better than or equal to the rules from which exemption is sought.<sup>3</sup>

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<sup>2</sup> See 49 U.S.C. § 44701(f) (authorizing the grant of exemptions from requirements of regulations prescribed pursuant to Sections 44701(a) and (b) and Sections 44702 - 44716).

<sup>3</sup> See 14 C.F.R. § 11.81(e), which requires a petition for exemption to include:

The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which you seek exemption.

**A. 14 C.F.R. Part 21, Subpart H – Airworthiness Certificates and 14 C.F.R. § 91.203(a)(1)**

The FAA has stated that no exemption is needed from this section if a finding is made under the Reform Act that the UAS selected provides an equivalent level of safety over aircraft normally used for the same application. These criteria are met, and therefore, no exemption is needed. See Grant of Exemption to Astraeus Aerial, Docket No. FAA-2014-0352 at 13-14, 22. If, however, the FAA determines that there are some characteristics of the chosen UAS that fail to meet the requirements of the Reform Act, an exemption is requested.

**Equivalent Level of Safety**

The UAS Perfect View will operate is safe taking into account its size, weight, speed, and operational capability. As set forth in Section II, Supra, the vehicle has a maximum take-off weight of 24 pounds, will be flown at less than 30 miles per hour and completely outside controlled airspace.

Power line inspection is currently carried out using helicopters that can weigh in excess of 6,000 pounds and carry a large load of fuel. Given the low altitude, helicopters cannot fly these missions as safely as a UAS, and there is a history of accidents that have killed not only flight crews but innocent bystanders on the ground due the inability to successfully autorotate in the event of an engine failure.<sup>4</sup> Similarly, the damage to critical infrastructure that results from a helicopter striking a transmission line or substation is far greater than if a small UAS has the same accident. As a result, national security is enhanced by substituting a UAS for a manned helicopter.

In all cases, an analysis of these criteria demonstrates that the UAS operated without an airworthiness certificate, in the restricted environment and under the conditions proposed, will be at least as safe as, or safer than, a conventional rotorcraft operating with an airworthiness certificate without the restrictions and conditions of the proposed UAS operations.

The aircraft itself does not need a means to communicate with other aircraft or ATC, because those capabilities will be with the pilot and observer who are not onboard. See Grant of Exemption, Docket FAA-2014-0352 at 13. In addition, no sense and avoid technology is necessary on the UAS because it will be operated at all times by visual line-of-sight. Id. The device has onboard capabilities to autonomously handle lost link situations.

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<sup>4</sup> <http://www.tsb.gc.ca/eng/rapports-reports/aviation/2008/a08p0125/a08p0125.pdf>.



**B. 14 C.F.R. Part 27 Airworthiness Standards: Normal Category Rotorcraft**

14 C.F.R. Part 27 sets forth the procedural requirements for airworthiness certification of normal category rotorcraft. To the extent the Petitioner's UAS would otherwise require certification under Part 27, Petitioner seeks an exemption from Part 27's airworthiness standards for the same reasons identified in the exemption request from 14 C.F.R. Part 21, Subpart H.

**C. 14 C.F.R. §§ 91.9(c), 45.23(b) and 45.27(a): Aircraft Marking and Identification Requirements**

Petitioner seeks an exemption from the aircraft marking and identification requirements contained in 14 C.F.R. §§ 91.9(c), 45.23(b) and 45.27(a).

- 14 C.F.R. § 91.9(c), Civil Aircraft Flight Manual, Marking and Placard requirements, provides that:

No person may operate a U.S.-registered civil aircraft unless that aircraft is identified in accordance with Part 45 of this chapter.

- 14 C.F.R. § 45.23(b), Markings of the Aircraft, states:

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.

- 14 C.F.R. § 45.27(a), Rotorcraft, states:

Each operator of a rotorcraft must display on that rotorcraft horizontally on both surfaces of the cabin, fuselage, boom, or tail the marks required by § 45.23.

In its previous Grant of Exemption, the FAA determined that exemption from these requirements was warranted provided that the aircraft "have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C if the markings are as large as practicable." FAA Docket No. FAA-2014-0352.

**Equivalent Level of Safety**

Perfect View will mark all aircraft with their N-Number in a prominent spot on the fuselage with markings that are as large as practicable.

**D. 14 C.F.R. § 91.9(b)(2): Civil Aircraft Flight Manual in the Aircraft and 14 C.F.R. § 91.203(a) and (b): Carrying Civil Aircraft Certification and Registration**

Pursuant to 14 C.F.R. § 91.9(b)(2):

- (b) 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.

Pursuant to 14 C.F.R. § 91.203(a) and (b):

- (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.

Perfect View does not request an exemption from this section but instead notifies the FAA that, in accordance with FAA Office of Chief Counsel's Opinion dated August 8, 2014, the UAS flight manual, registration certificate and other documentation will be kept at the control station with the PIC during flight. The Chief Counsel's Office has held that for all UAS operations, this alternate method constitutes full compliance with the regulations.

**E. 14 C.F.R. § 91.7(a): Civil Aircraft Airworthiness**

Petitioner seeks an exemption from 14 C.F.R. § 91.7(a), which requires that a civil aircraft be in airworthy condition to be operated. The FAA has stated that no exemption is required to the extent that the requirements of Part 21 are waived or found inapplicable. Accordingly, Petitioner request that the requirements for Section 91.7 are treated in accordance with Section V(A), supra.

**F. 14 C.F.R. § 91.103: Preflight Action**

Petitioner seeks an exemption from 14 C.F.R. § 91.103, which requires a PIC to become familiar with specific information before each flight, including information contained in the FAA-approved Flight Manual on board the aircraft. While the PIC will be familiar with all information necessary to safely conduct the flight, an exemption is requested to the extent that an FAA-approved Flight manual is required.

**Equivalent Level of Safety**

An equivalent level of safety will be provided by following the Aircraft Operations Manual and flight manual provided by the manufacturer. The PIC will take all required preflight actions - including performing all required checklists and reviewing weather, flight battery requirements, landing and takeoff distance, aircraft performance data, and contingency landing areas - before initiation of flight. The Aircraft Operations Manual and manufacturer's flight manual will be kept at the ground station with the operator at all times.

**G. 14 C.F.R. § 91.109(a): Flight Instruction**

Petitioner seeks an exemption from 14 C.F.R. § 91.109(a), which provides that "[n]o 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." UASs and remotely piloted aircraft, by their design, do not have functional dual controls. Instead, flight control is accomplished through the use of a device that communicates with the aircraft via radio communications.

**Equivalent Level of Safety**

Given the size and speed of the UAS, an equivalent level of safe training can still be performed without dual controls because no pilot or passengers are aboard the UAS, and all persons will be a safe distance away in the event that the UAS experiences any difficulties during flight instruction.

In addition, Petitioner has established a flight training program that will be administered by a certified flight instructor. That training program includes both classroom instruction as well as supervised flight training employing the same aircraft that will be used operationally to conduct power infrastructure inspections. Accordingly, Perfect View's proposed method of operation provides superior levels of safety.

**H. 14 C.F.R. § 91.119: Minimum Safe Altitudes**

Petitioner requests an exemption from the minimum safe altitude requirements of 14 C.F.R. § 91.119. Section 91.119 prescribes the minimum safe altitudes under which aircraft may

not operate, including 500 feet above the surface and away from any person, vessel, vehicle, or structure in non-congested areas. *See* 14 C.F.R. § 91.119(c). Section 91.119(d) allows for a helicopter to operate at less than those minimum altitudes when it can be operated "without hazard to persons or property on the surface," provided that "each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA."

### **Equivalent Level of Safety**

Compared to flight operations with rotorcraft weighing far more than the maximum UAS weight proposed herein, and given the lack of flammable fuel, any risk associated with these operations is far less than those that presently exist with conventional aircraft. An 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. In order to avoid any risk to aircraft, flight operations will be restricted to 400' AGL or below. As set forth in the Manual, the UAS will be operated in a restricted area, away from persons or structures not involved in the operation.

#### **I. 14 C.F.R. § 91.121: Altimeter Settings**

This petition seeks an exemption from 14 C.F.R. § 91.121, which requires a person operating an aircraft to maintain cruising altitude or flight level by reference to an altimeter that is set to the elevation of the departure airport or barometric pressure. An exemption is required to the extent that the UAS does not have a barometric altimeter, but rather a GPS altitude read out.

### ***Equivalent Level of Safety***

The FAA has stated that an equivalent level of safety can be achieved if the UAS will be operated at 400' or below and within visual line-of-sight in addition to GPS based altitude information relayed in real time to the operator. *See* Grant of Exemption to Astraeus Aerial, Docket No. FAA-2014-0352. As the attached Operations Manual indicates, the chosen UAS meets these requirements, and a zero altitude initiation point will be obtained prior to flight.

#### **J. 14 C.F.R. § 91.151(a): Fuel Requirements for Flight in VFR Conditions**

Petitioner requests an exemption from 14 C.F.R. § 91.151(a)'s fuel requirements for flight in VFR conditions. Section 91.151 states:

- (a) No person may begin 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.

Here, the technological limitations on UAS battery power means that no meaningful flight operations can be conducted while still maintaining a 30 minute reserve. Perfect View proposes that all flights comply with this requirement by mandating that the aircraft be safely landed with no less than 25% of battery life remaining.

#### **Equivalent Level of Safety**

The FAA has stated that an equivalent level of safety is provided if the UAS flight is terminated with at least 25% reserve battery power still available. See Grant of Exemption to Astraeus Aerial, Docket No. FAA-2014-0352. The Operations Manual conforms to this limit, providing an equivalent level of safety.

#### **K. 14 C.F.R. § 91.405(a), 91.407(a)(1), 91.409(a)(2); 91.417(a) and (b): Maintenance Inspections**

Petitioner seeks an exemption from the maintenance inspection requirements contained in 14 C.F.R. § 91.405(a), 91.407(a)(1), 91.409(a)(2); 91.417(a) and (b). These regulations specify maintenance and inspection standards in reference to 14 C.F.R. Part 43. *See, e.g.,* 14 C.F.R. § 91.405(a) (stating that each owner or operator of an aircraft "[s]hall have the aircraft inspected as prescribed in subpart E of this part and shall between required inspections ...have discrepancies repaired as prescribed in part 43 of this chapter"). An exemption to these regulations is needed because Part 43 and these sections only apply to aircraft with an airworthiness certificate, which the UAS will not have.

#### **Equivalent Level of Safety**

An equivalent level of safety will be achieved because maintenance and inspections will be performed in accordance with the UAS Manufacturer's Manual, as referenced in the Operations Manual. As provided in the Operations Manual, flights will not be conducted unless a flight operations checklist is performed that includes all of the aircraft's components. The Operations Manual also sets requirements for maintenance log books and record keeping as well as routine and post-flight maintenance. The Manual sets requirements for both annual maintenance and preventative maintenance based on hours of flight.

#### **L. 14 CFR § 61.113: Private Pilot Privileges And Limitations**

Petitioner seeks exemption from 14 CFR § 61.113, which restricts private pilot certificate holders from flying aircraft for compensation or hire, and would also require a second class medical certificate. The purpose of Part 61 is to ensure the skill and competency of any PIC matches the airspace in which the PIC will be operating, as well as requiring certifications if the private pilot as carrying passengers or cargo for hire. In this case, while the UAS will be

operated as part of a commercial operation, it carries neither passengers nor cargo. In the Grant of Exemption in FAA Docket No. FAA-2014-0352, the FAA determined that the unique characteristics of UAS operation outside of controlled airspace did not warrant the addition cost and restrictions attendant with requiring a the PIC to have a commercial pilot certificate and class II medical certificate.

Perfect View will employ licensed private pilots as PIC for their operation. The restrictions Perfect View has placed on its UAS operations meet or exceed the restrictions similarly imposed on Astraeus Aerial in FAA Docket No. FAA-2014-0352. Perfect View will operate in a sterile area way from persons and property not involved in the inspection. It will be flown based on VLOS and below 400' AGL. A NOTAM will be issued between 48 and 72 hours before the flight is to occur, and the flight will be coordinated with the applicable FSDO.

#### **Equivalent Level of Safety**

In addition to these flight restrictions, Perfect View will further ensure safe operation by requiring that any PIC be thoroughly versed not only in airspace and communication issues pertaining to all aircraft operators but also in the unique aspects of UAS flight. Accordingly, as set forth in the Operations Manual, Perfect View has created specific training programs for both pilots and observers to meet this need. The course syllabus is attached to the Operations Manual. All training will be provided by an FAA-certified Flight Instructor. Petitioner believes that this system will provide a higher level of competency and proficiency for its pilots than simply permitting those with either a private pilot license to act as PIC by default. In addition, all observers and PIC will have a class III medical certificate.

#### **V. DRUG AND ALCOHOL PROGRAM**

As set forth in the Manual, Perfect View is committed to a drug-free work place and the right of the flying public it serves to safe and efficient air transportation. All employees of Perfect View who perform safety sensitive and/or security related functions are prohibited from performing work if they have alcohol or a prohibited drug in their system.

#### **VI. PUBLIC INTEREST**

Granting Perfect View's exemption request furthers the public interest. National policy set by Congress favors early integration of UAS into the NAS in controlled, safe working environments such as those proposed in this petition. In addition, maintaining industrial safety has been a priority of state and local governments for decades. By their nature, each of the proposed uses of a UAS offer superior safety to performing the same tasks with conventional aircraft or rotorcraft.

In addition, the public also has an interest in reducing the hazards and emissions associated with alternate use of helicopters to conduct similar inspection operations. The UAS in

question is very light weight and does not carry any flammable fuel, further reducing the risk from any potential accident.

## **VII. PRIVACY**

All flights will be conducted in accordance with any federal, state or local laws regarding privacy.

## **VIII. FEDERAL REGISTER SUMMARY**

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:

Perfect View seeks an exemption from the following rules:

14 CFR Part 21, Subpart H; 14 CFR Part 27; 14 CFR 45.23(b); 14 CFR § 61.113; 14 CFR 91.7(a); 14 CFR 91.9(b)(2); 14 CFR 91.103; 14 CFR 91.109(a); 14 CFR 91.119; 14 CFR 91.121; 14 CFR 91.151(a); 14 CFR 91.203 (a) & (b); 14 CFR 91.405(a); 14 CFR 91.407(a)(1); 14 CFR 91.409(a)(2); 14 CFR 91.417 (a) & (b).

Approval of these exemptions will allow Perfect View to offer thermal and photographic inspection of power infrastructure, including power lines and substations. The exemptions will enhance safety by reducing risk to the general public and property owners from the substantial hazards associated with performing equivalent work with conventional rotorcraft.

## **IX. CONCLUSION**

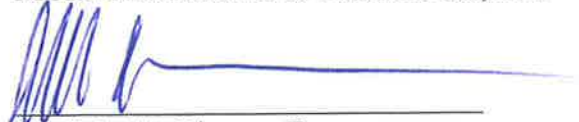
Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012—size, weight, speed, operating capabilities, proximity to airports and populated areas, operation within visual line of sight, and national security—provides more than adequate justification for the grant of the requested exemptions to permit Perfect View to operate the selected UAS and provide inspection services for power infrastructure.

Granting the requested exemption will benefit the public interest as a whole in many ways, including (1) significantly improving safety and reducing risk by alleviating human exposure to danger, and (2) improving the quality of services and decreasing operating costs compared with conventional flight operations.

If you have any questions or require any additional information, please do not hesitate to call.

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MCKENNA LONG & ALDRIDGE, LLP



Mark E. McKinnon, Esq.

Attachments: PVAM Operations Manual (submitted as a Confidential Document under 14 C.F.R. § 11.35(b) and exempt from disclosure under the Freedom of Information Act, 5 U.S.C. § 552 *et seq.*, and any other requirements established by the FAA pursuant to Section 333 of the Reform Act).