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

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

CORRECTED COPY

The FAA is reissuing the July 17, 2015 grant of exemption of Exemption No. 12073. A correction was made to clarify the aircraft and add closed set filming. Below is the amended Exemption No. 12073 that includes the aforementioned changes. We made the correction in our records as of September 21, 2015.

July 17, 2015

Exemption No. 12073
Regulatory Docket No. FAA–2015–1367

Mr. Kevin Adkins
President
Crossview Concepts Corporation, Inc.
1986 James Gaynor Street
Fallbrook, CA 92028

Dear Mr. Adkins:

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

By letters dated April 19 and May 12, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Crossview Concepts Corporation, Inc. (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct on-demand commercial sUAS operations.

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

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

Airworthiness Certification

The UAS proposed by the petitioner are the DJI Inspire 1, DJI Spreading Wings S1000, DJI Phantom 2, DJI Phantom 3, Aeryon Sky Ranger, 3D Robotics X8-M, 3D Robotics Solo, Prioia Hex, Prioia Maverick, Hoverfly LiveSky, Hoverfly BigSky 60, Hoverfly H-Frame, X Fold Quadcopter, X-Fold Hexcopter, X-Fold Octocopter, X-Fold X-12, InovaDrone Inova One, R/C Rotors and Aerial Media Matrix Professional Multi-Rotor Frame, R/C Rotors and Aerial Media Octocopter Heavy Lift Professional Multi-Rotor Frame Ronin Edition, and Microdrone MD4-1000.

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

The Basis for Our Decision

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

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

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

[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.

- A grant of exemption is in the public interest.

Our Decision

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

Conditions and Limitations

In this grant of exemption, Crossview Concepts Corporation, Inc. is hereafter referred to as the operator.

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

1. Operations authorized by this grant of exemption are limited to the DJI Inspire 1, DJI Spreading Wings S1000, DJI Phantom 2, DJI Phantom 3, Aeryon Sky Ranger, 3D Robotics X8-M, 3D Robotics Solo, Prioia Hex, Prioia Maverick, Hoverfly LiveSky, Hoverfly BigSky 60, Hoverfly H-Frame, X Fold Quadcopter, X-Fold Hexcopter, X-Fold Octocopter, X-Fold X-12, InovaDrone Inova One, R/C Rotors and Aerial Media Matrix Professional Multi-Rotor Frame, R/C Rotors and Aerial Media Octocopter Heavy Lift Professional Multi-Rotor Frame Ronin Edition, and Microdrone MD4-1000when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are permitted.

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

Sincerely,

John S. Duncan
Director, Flight Standards Service

Enclosures

19 Apr 2015

MSgt Kevin Adkins USMC (Ret)
President
Crossview Concepts Corporation, Inc.
1986 James Gaynor Street
Fallbrook, CA 92028
C: (760)645-5215
kadkins@crossview-concepts.com

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

Subj: CROSSVIEW CONCEPTS CORPORATION, INC. SECTION 333 SUBMISSION TO FAA FOR APPLICATIONS/ PETITIONS/EXEMPTIONS AND ANY OTHER ITEMS FOR WHICH A DOCKET DOES NOT EXIST.

Ref: 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); 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).

Sir or Madam,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and 14 C.F.R. Part 11, Crossview Concepts Corporation, Inc., an operator of Small Unmanned Aircraft Systems ("sUAS") equipped to offer on-demand commercial sUAS operations for a host of industries and applications. These include:

- Aerial search and rescue operational support
- Infrastructure inspection
- Agricultural monitoring and support
- Industrial refinery and manufacturer plant inspection
- Accident/Incident survey and investigative support
- Flare stack inspection
- Private security monitoring
- Utility-power generation system inspections and patrolling
- Pipeline inspection and patrolling
- Filmmaking, cinematography, and videography
- Wildlife and forestry monitoring
- Aerial surveying and mapping
- Construction site inspection and monitoring
- Public Entity Support Operations
- Maritime aerial operations

• Reality and wedding videography and imagery
• sUAS consulting

Crossview Concepts Corporation, Inc. hereby applies for an exemption from the listed Federal Aviation Regulations ("FARs") to allow commercial operation of its sUASs, 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. To include, FAA Certificate of Waiver or Authorization (COA) that are issued to Crossview Concepts Corporation, Inc.

As described below, the requested exemption would permit the operation of green minded sUASs relatively inexpensively under controlled conditions in the National Airspace System (NAS) that is 1) limited, 2) predetermined, 3) controlled sUAS access and operation, and 4) would provide safety enhancements to the already safe operations using conventional aircraft. Approval of this exemption would thereby enhance 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.

The name and address of the applicant is:

Crossview Concepts Corporation, Inc.
Attn: Kevin Adkins
1986 James Gaynor Street
Fallbrook, California 92028
Ph: (252) 626-6335
Email: kadkins@crossview-concepts.com

Regulations from which the exemption is requested:

14 CFR Part 21
14 C.F.R. 45.23(b)
14 CFR 61.113 (a) & (b)
14 C.F.R. 91.7 (a)
14 CFR 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 CFR 91.151 (a)
14 CFR 91.203 (a) & (b)
14 CFR 91.405 (a)
14 CFR 407 (a) (1)
14 CFR 409 (a) (2)
14 CFR 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 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 Section 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.* Section 333(c) (emphasis added)
Applicant interprets this provision to place the duty on the Administrator to not only process applications for exemptions under Section 333, but for the Administrator to craft conditions for the safe operation of the UAS, if it should be determined that the conditions set forth herein do not fulfill the statutory requirements for approval. 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 SUASs, 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).

Crossview Concepts Corporation, Inc. request that an exemption be granted to any requirement for SUAS operators to hold either an airline transport, commercial, private, recreational, or sport pilot certificate. This request is in concert with the FAA 14 CFR Parts 21, 43, 45 Operation and Certification of Small Unmanned Aircraft Systems: Proposed Rule dated 23 Feb 2015. To add, model aircraft operators operate unmanned aircraft that are comparable in size, weight, and speed, but the operator is not required to hold a manned pilot certificate. If this exemption is granted, the requestor shall ensure that operators pass an aeronautical knowledge test and recertify annually as proposed by the FAA Rule Making Committee. The aeronautical knowledge test shall be similar to current military knowledge standards until the FAA establishes the FAA aeronautical knowledge test for sUAS operators. All operators shall be a minimum age of 17 years old and be a U.S. citizen with a valid FAA Class II Medical Certificate and state issued driver's license.

The applicant request that the members of the sUAS aircrew shall not be required to hold a pilot's license or certificate beyond the FAA Class II Flight Medical Certificate or commercial driver's license. Due to the lack of identified UAS Pilot in Command (PIC) FAA Certificate requirement that are not outlined in Section 336 of Public Law 112-95 (the *FAA Modernization and Reform Act of 2012*), Section 334 "PUBLIC UNMANNED AIRCRAFT SYSTEMS", or Section 336 "SPECIAL RULE FOR MODEL AIRCRAFT". Therefore, the applicant is requesting an exemption from Pilot In Command (PIC), also identified as the Vehicle Operator (VO) throughout this document, not to be required to hold "…an airline transport, commercial, private, recreational, or sport pilot certificate" as annotated in previous Section 333 Exceptions authorized. Each vehicle operator shall be certified on each sUAS type before designation as a vehicle operator (VO) for each sUAS type. Before Crossview Concepts Corporation, Inc. sUAS assets are authorized for autonomous aircrew operational flights; currency and designations shall be maintained and authorized by Crossview Concepts Corporation, Inc. All records for personnel and sUAS shall be made available upon request by an FAA Administrator or law enforcement agency or

representative. Preflight and post flight inspections shall be conducted as Standard Operating Procedure (SOP) within Crossview Concepts Corporation, Inc. Incidents/mishaps that involve injury or damage shall be reported to the FAA within 10 business days of the incident/mishap. A safety mind frame of each operator is critical to the success of the Crossview Concepts Corporation, Inc. and shall be grounds for termination when Safety of Flight (SOF) and overall ground safety is not applied.

Crossview Concepts Corporation, Inc. sUASs are vertical take-off and landing (VTOL) rotary-winged air vehicles (AV) and fixed-wing AV, weighting 55 lbs or less including payload. They operate, under normal conditions at a speed of no more than 87 knots (100 MPH), operation not to exceed manufacturer recommended airspeed, and have the capability to hover and move in the vertical and horizontal plane simultaneously. The sUAS assets will operate only in line of sight and will operate only within a sterile area. Such operations will insure that the sUAS will "not create a hazard to users of the national airspace system or the public."

Reform Act Section 333 (b). Given the small size of the sUASs involved and the restricted sterile environment within which they will operate, the applicant falls squarely within the zone of safety (an 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 restricted areas in which the relevant sUASs 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 UASs, the grant of the requested exemptions is in the public interest.

In regards to the Section 336 of Public Law 112-95 (the *FAA Modernization and Reform Act of 2012*), Section 334 "PUBLIC UNMANNED AIRCRAFT SYSTEMS", or Section 336 "SPECIAL RULE FOR MODEL AIRCRAFT", extract: "…when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator/ manager and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport))." The applicant request that the same consideration, that is outlined in Section 336 of Public Law 112-95 (the *FAA Modernization and Reform Act of 2012*), Section 334 "PUBLIC UNMANNED AIRCRAFT SYSTEMS", or Section 336 "SPECIAL RULE FOR MODEL AIRCRAFT", be equally applied to the Crossview Concepts Corporation, Inc. commercial sUAS operations within five miles of an airport as given to the model aircraft operators. The commercial sUAS operations conducted and experience by the applicant shall far exceed the model aircraft operations safety measures, expertise, and practices at any given time and shall mirror current sUAS safety practices conducted by NAVAIR PMA-263 Group 1 UAS operations as applied in the Training and Logistics Support Activity (TALSA) schoolhouses located at MCB Camp Lejeune, NC and MCB Camp Pendleton, CA. The following information is provided to support the aforementioned statement. The owner, a retired U.S. Marine after 24 years of service, of Crossview Concepts Corporation, Inc. holds the distinct pleasure of establishing the TALSA procedures, imposed airspace control measures, policies, authoring all schoolhouse document templates, maintaining and authoring sUAS curricula, and assessing the safety and overall performance of each TALSA region schoolhouse. In addition, the owner of Crossview Concepts Corporation, Inc. has performed the duties as a RQ-11B Raven, RQ-12A WASP AE, and RQ-20A PUMA AE sUAS-Operator, sUAS-Evaluator, sUAS

Initial Qualification Training Instructor (IQT-I), sUAS-Program Manager, sUAS Test Flight Lead, schoolhouse Site Lead at both locations, and served as the TALSA Manager.

This exemption would be in concert with the current FAA Rule making Committee's Small UAS Rules Proposal and the Modernization Act. The FAA decision to grant this exemption would eliminate the exemption request of 14 C.F.R. § 1.113 (a) & (b): Private Pilot Privileges and Limitations: Pilot in Command. Accordingly, the applicant respectfully requests that the FAA grant the requested exemption without delay.

AIRCRAFT AND EQUIVALENT LEVEL OF SAFETY

The applicant will operate the following aircraft:

1. DJI Inspire 1
2. DJI Spreading Wings S1000
3. DJI Phantom 2
4. DJI Phantom 3
5. Aeryon Sky Ranger
6. 3DR X8-M

The applicant proposes that the exemption requested herein apply to civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure because the proposed operations represent a safety enhancement to the already safe operations conducted with conventional aircraft. These limitations and conditions to which Crossview Concepts Corporation, Inc. agrees to be bound when conducting commercial operations under an FAA issued exemption include:

1. The sUAS will weigh less than 55 lbs.
2. Flights will be operated within line of sight of a vehicle operator (VO) and/or observer.
3. Maximum total flight time for each operational flight will not exceed the capabilities and limitations of the sUAS type operated per manufacture specifications and recommendations. Flights will be terminated at no less than 15% battery power reserve during any flight to ensure Safety of Flight (SOF).
4. Day flights will be operated at an altitude of no more than 400 feet AGL.
5. Range of operation and altitude shall be decreased when operating in close vicinity of airfields that are not controlled by air traffic control (ATC) in Class G airspace. Where airfields are controlled by ATC or other forms, coordination and permissive operations shall be coordinated with the appropriate airspace control authority (ACA), i.e. Class B, Class C, Class, D, and Class E airspace. Class A airspace shall be avoided. Operation under Class E airspace and imposing a self-imposed safety buffer below the Class E airspace shall only be conducted after proper coordination with the Class E airspace ACA. Safety buffers shall be reasonable and flights shall be cancelled if Safety of Flight (SOF) is ever a concern by the ACA or of the sUAS VO.
6. Minimum crew for each operation will consist of the sUAS vehicle operator (VO). If line-of-sight (LOS) is an issue during sUAS flight operations, an observer shall be utilized. When operating specific sUAS air vehicles during specific missions, a Payload Operator (PO) shall be a part of the aircrew.
7. sUAS VO shall be trained and certified in the sUAS type operating and have visual acuity, correctable by glasses or contacts, of 20/20 and not be color blind.

8. sUAS VO shall perform as the Pilot in Command (PIC) duties and be responsible for the sUAS SOF. Consideration to obstacles, safe launch/recovery area, LOS, sUAS capabilities and limitations, sUAS Operational Brief, pre/post flight operations, and Crossview Concepts Corporation, Inc. imposed airspace control measures and procedures shall be adhered to, i.e. mandatory ascending/descending Elevator Points, Emergency Holding Points, etc.
9. A sUAS flight path shall never be programmed to fly over another sUAS launch/recovery site and/or Ground Control Station (GCS).
10. Multiple sUAS launch/recovery sites shall ensure that sUAS VOs coordinate through positive communication during sUAS operations and shall stagger AV launches and landings to ensure SOF.
11. The sUAS will only operate within an identified confined "Sterile Area" of the flight operations area. Area shall be surveyed by the aircrew prior to sUAS operational flight commencement. sUAS operations within the aforementioned operations area shall not commence unless, if applicable, required ACA coordination has been completed, agreed upon, and authorized.
12. A sUAS brief shall be conducted in regard to the day's planned sUAS operations. sUAS Brief shall be conducted before sUAS flight operations commence. The sUAS Brief is mandatory and all participating personnel who will be performing duties within the boundaries of the safety perimeter shall be present for this briefing.
13. The operator shall obtain the consent of all persons involved and ensure that only consenting persons will be allowed within 75 feet (25 meters) radius of the SUAS launch/recovery site (GCS); the radius may be reduced to 30 feet (10 meters) based upon an equivalent level of safety and environment conditions and restrictions determination by the sUAS VO (PIC).
14. sUAS VO shall maintain current proficiency in all sUAS type that they are certified with.
15. During all sUAS operations, where an observer is utilized, positive communication shall be maintained between the sUAS VO and the observer.
16. Written and/or oral permission from the relevant property holders shall be obtained.
17. 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 when applicable.
18. If the sUAS is the subject of a Loss of Link (LOL) emergency or a GPS Loss emergency, the sUAS will have the capability to return to a pre-determined location within the operating area, i.e. manual control, and/or land safely, i.e. "land immediately" feature or similar.
19. The sUAS will have the capability to abort a flight in case of emergencies and the VO shall conduct established Crossview Concepts Corporation, Inc. Emergency Procedures and manufacturer established emergency procedures.
20. All sUAS incidents that involve death, injury, damage to equipment (other than the company owned sUAS), and damage to property (other than company owned) shall be reported appropriately.
21. "Right of way" shall always be given to all other manned and unmanned air vehicles in every scenario and event without exception. Special consideration shall always be granted in every event that requires actions that would prevent death of injury of any person.
22. Crossview Concepts corporation, Inc., on the behalf of the sUAS VO, shall submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed sUAS operations. It is understood that the 3-day notification may be waived with the concurrence of the FSDO. The plan of activities shall include at least the following:
a. Dates and times for all flights.
b. Name and phone number of the vehicle operator (VO) for the sUAS conducting the sUAS operation under this grant of exemption.
c. Name and phone number of the person responsible for the on-scene operation of the sUAS.
d. Make, model, and serial or N-Number of sUAS to be used

e. Name and certificate number of sUAS vehicle operator (VO)/pilot in command (PIC) involved in the sUAS operation.
f. A statement that the VO has obtained permission from property owners and/or, if applicable, local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request.
g. Signature of exemption holder or representative.
h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

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 the Applicant, 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 UAS. In all cases, an analysis of these criteria demonstrates that the sUAS 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 rotary-wing) operating with an airworthiness certificate without the restrictions and conditions proposed. The sUAS to be operated hereunder is less than 55 lbs. fully loaded, carries neither a pilot nor passenger, carries no explosive materials or flammable liquid fuels, and operates exclusively within a safe area as set out in the Manual. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator, pursuant to the Manual'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 filming during filming services. In regard to motion picture and television production, security of the filming location adds to and provides 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. This type of local operations area security is also found within the industrial and manufacturing areas, specific national, state, local, and privately controlled areas, and during local emergencies that are supported. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the sUAS, 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 SUAS will have no airworthiness certificate, an exemption may be needed as the sUAS will have no entrance to the cabin, cockpit or pilot station on which the word "Experimental" can be placed. Given the size of the sUAV, two-inch lettering will be impossible. The word "Experimental" will be placed on the fuselage in compliance with §45.29 (f). The equivalent level of safety will be provided by having the SUAV marked on its fuselage as required by §45.29 (f) where the sUAS air vehicle (AV) vehicle operator (VO), AV visual observer, and others working with the sUAS will see the identification of the sUAS as marked appropriately with registered aircraft markings.

Each Crossview Concepts Corporations, Inc. sUAS air vehicle shall be registered with the FAA and the FAA aircraft registration number shall be placed on the air vehicle in the largest practicable manner. The FAA has issued the following exemptions to this regulation to Exemptions Nos. 10700, 8738, 10167 and 10167A.

14 C.F.R. §1.113 (a) & (b): Private Pilot Privileges and Limitations: Pilot in Command. Section 61.113 (a) & (b) limit private pilots to non-commercial operations**.** Because the UAS will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety of current operations by requiring the PIC operating the aircraft to have a private pilot's license rather than a commercial pilot's license to operate this sUAS. Unlike a conventional aircraft that carries the pilot and passengers, the sUAS is remotely controlled with no living thing on board. The area of operation is controlled and restricted, and all flights are planned and coordinated in advance. The level of safety provided by the requirements included in the Manual exceeds that provided by a single individual holding a commercial pilot's certificate operating a conventional aircraft. The risks associated with the operation of the sUAS are so diminished from the level of risk associated with commercial operations contemplated by Part 61 when drafted, that allowing operations of the sUAS as requested with a private pilot as the PIC exceeds the present level of safety achieved by 14 C.F.R. §61.113 (a) & (b).

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 Manual for maintenance and use of safety check lists prior to each flight, as set forth in Sections (j), (l) and (q), an equivalent level of safety will be provided.

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 it is available in the aircraft, a current approved airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof. The sUAS, given its 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 flight manual at the GCS within the reach of the sUAS vehicle operator for immediate access. 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. The sUAS vehicle operator will take all actions including reviewing weather, flight battery requirements, launch paths and landing approaches, and aircraft pre-flight check parameters and data before committing to a AV Launch.

14 C.F.R. §91.109: Flight instruction. Section 91.103 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. sUASs and remotely piloted aircraft, by their design do not have fully functional dual controls. Flight control is accomplished through the use of the GCS Hand Controller Unit (HCU) 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 provided by the fact that 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 a sUAS that is for not only sUAS fixed-wing AVs, but also SUAS rotary-winged (helicopter) and the exemption requests authority to operate at altitudes up to400 AGL, an exemption may be needed to allow such operations. As set forth herein, except for the limited conditions stated in the Manual, the sUAS will never operate at higher than 400 AGL unless authorized by a COA or the published FAA rules for sUAS scheduled to be published in 2015. 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. No flight will be taken without the required ACA coordination, permission of the property owner or local officials, and other unforeseen requirements that may arise. Due to the advance notice to the property owner and participants in the aerial activity, all affected individuals will be aware of the planned sUAS flight operations. Compared to flight operations with aircraft or rotorcraft, weighting far more than the maximum 55lbs. proposed herein and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented with conventional aircraft operating at or below 400 AGL other industries. In addition, the low-altitude operations of the SUAS will ensure separation between these sUAS 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 sUAS 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 sUAS vehicle operator, pursuant to the Manual and Safety Check list, confirming the altitude of the launch/recovery site shown on the GPS altitude indicator before flight.

14 C.F.R. §91.151(a): Fuel Requirements for Flight in VFR Conditions. Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed – (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes." The battery powering the sUAS provides set flight endurances for each sUAS type. To meet the 30-minute reserve requirement in 14 CFR §91.151, sUAS flights would be extremely limited or not be able to fly at all. Given the limitations on the sUAS's proposed flight area and the location of its proposed operations within a predetermined area, a longer time frame for flight in daylight VFR conditions is reasonable. Applicant 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 sUAS, in a tightly controlled area where only people and property owners or official representatives who have signed waivers will be allowed, with less than 30 minutes of reserve fuel, does not engender the type of risks that Section 91.151(a) was intended to alleviate given the size and speed of the small UAS. Additionally, limiting sUAS flights to extreme minimum flight time would greatly reduce the utility for which the exemption will be granted. Applicant believes that an equivalent level of safety can be achieved by limiting flights to the manufacture's flight endurance specifications and self-imposing minimum reserve battery life to force a controlled landing safely without exceeding the manufacturer's

maximum flight endurance specifications. This restriction would be more than adequate to return the sUAS to its planned launch/recovery site from anywhere within 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 Section 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 sUAS, fully loaded, weighs no more than 55 lbs 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 SUAS. An equivalent level of safety will be achieved by keeping these documents at the GCS where the sUAS vehicle operator operating the AV will have immediate access to them, to the extent they are applicable to the sUAS. 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 sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to the applicant. The operator pursuant to the flight manual and operating handbook will accomplish maintenance. An equivalent level of safety will be achieved due to the nature of these sUASs based on their sized and will carry a small payload and operate only in observed controlled areas for limited periods of time. If mechanical issues arise, the SUAS can land immediately and will be operating from no higher than 400 feet AGL unless otherwise authorized through a FAA COA. The operator will ensure that the sUAS is in working order prior to initiating flight and perform required operator maintenance. Major maintenance events beyond basic operator maintenance shall be recorded in the sUAS equipment record jacket maintained by the applicant. Moreover, the vehicle 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.

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: Applicant 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 aircraft vehicle (SUAS) (55 lbs. or less). Approval of exemptions allowing commercial operations of sUASs, will enhance safety by reducing risk while operating within the NAS. Conventional operations, using jet or piston power aircraft, operate at extremely low altitudes just feet from the subjects being filmed or equipment being inspected and in extreme proximity to people and structures and present the risks associated with vehicles that weigh in the neighborhood of 4,000lbs, carrying large amounts of Jet A, JP-8 or other fuel. Such aircraft must fly to and from the operational location. In contrast, a sUAS weighing fewer than

55lbs. and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The sUAS is carried to the operation site and not flown. The SUAS will carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights. The operation of sUASs, weighting less than 55 lbs., conducted in the strict conditions aforementioned, will provide an equivalent level of safety supporting the grant of the exemptions requested herein, including exempting the applicant from the requirements of Part 21 and allowing commercial operations. These lightweight aircraft operate at slow speeds, close to the ground, and in a sterile environment; resulting in a far safer air vehicle flight than conventional aircraft operations utilizing combustible fuels and rotating blades operating within close proximity to the ground, personnel, and equipment during filming and inspections. Crossview Concepts Corporation, Inc. has every intention to adhere to and comply with established policies, rules, guidelines, and established laws.

Privacy

Privacy of personnel and property shall be adhered to. No person shall be surveilled unless proper authorization is provided by the appropriate authorizing agency or organization in accordance with established intelligence oversight practices and in compliance with all applicable regulations, orders, publications, and/or policies. All flights will occur over private or controlled access property with the property owner's prior consent and knowledge, unless the area is deemed a public area. Navigational imagery may be used to support incident/mishap reporting as applicable. Only imagery supporting the purpose of the sUAS operational flight shall be utilized for the appropriate purpose. Commercial Film and TV filming events will be of people who have also consented to being filmed or otherwise have agreed to be in the area where filming will take place. All sUAS operations shall be conducted in consideration to the direction to government entities set forth in the Presidential Memorandum, *Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems (February 15, 2015).* The grant of this exemption request will provide improved safety in both day and low-light 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 grant of the requested exemptions allowing commercial operation of applicant's commercial and private sUAS.

Respectfully,

Kevin Adkins
President
Crossview Concepts Corporation, Inc.
Small Unmanned Aircraft Systems (SUAS) Service Provider