



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

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

June 11, 2015

Exemption No. 11796
Regulatory Docket No. FAA-2015-1051

Mr. Josh Taylor
Owner
Vertical Approach Aerial Solutions, LLC
126 Waverly Way
Aledo, TX 76008

Dear Mr. Taylor:

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

By letter dated April 11, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Vertical Approach Aerial Solutions, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, video, and survey.

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 is a DJI Inspire 1.

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, *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 collection¹. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA–2014–0352), 11109 to Clayco, Inc. (*see* Docket No. FAA–2014–0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA–2014–0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA–2014–0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

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

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

Our Decision

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

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.

Conditions and Limitations

In this grant of exemption, Vertical Approach Aerial Solutions, LLC is hereafter referred to as the operator.

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

1. Operations authorized by this grant of exemption are limited to the DJI Inspire 1 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.
2. Operations for the purpose of closed-set motion picture and television filming are not permitted.
3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.
4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.
5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.
6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.
7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents,

the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.
9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.
10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.
11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.
12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.
13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.
15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.
16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.
17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.
18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.
19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.
20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.
21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.
23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.
24. The UA must remain clear and give way to all manned aviation operations and activities at all times.
25. The UAS may not be operated by the PIC from any moving device or vehicle.
26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
 - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
 - b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.
28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.
30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
 - a. Dates and times for all flights;
 - b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
 - c. Name and phone number of the person responsible for the on-scene operation of the UAS;
 - d. Make, model, and serial or N-Number of UAS to be used;
 - e. Name and certificate number of UAS PICs involved in the aerial filming;
 - f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
 - g. Signature of exemption holder or representative; and
 - h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.
31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

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

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

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Enclosures

Project Officer: _____

**MR JOSH TAYLOR
126 WAVERLY WAY
ALEDO TX 76008**

Vertical Approach Aerial Solutions, LLC
126 Waverly Way
Aledo, TX 76008
April 11th, 2015

Docket Operations, M-30
U.S. Department of Transportation
Room W12-140, West Building Ground Floor
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Re: Exemption Request under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the “Reform Act”) and 14 C.F.R. Part 11, Vertical Approach Aerial Solutions, LLC (Operator) seeks an exemption from Federal Aviation Regulations (FARs) to allow commercial operations of their UASs (Unmanned Aerial Systems) for the purpose of conducting aerial photography, video, and survey for various industries.

Regarding the Unmanned Aircraft Systems

1. The requested exemption would support an application for a commercial Certificate of Authorization (COA) to use the below described UAS, so long as operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333. Like the FAA, it is the Operator’s mission to provide the safest and most efficient means of Civil Commercial implementation into the National Airspace System (NAS). Furthermore, the Operator is comprised of members with the equivalent of a FAA Commercial Certificate or higher adding an additional layer of high regard for safe operations as well as the necessary high-level of understanding of the NAS and FARs.
- DJI Inspire 1 – Reference *Inspire 1 User Manual (EN) v1.0*
 - The Inspire 1 is a quadcopter UAS capable of capturing 4K video and transmitting an HD video signal to a ground station. Equipped with retractable landing gear, it can capture an unobstructed 360 degree view from its camera. The built-in camera has an integrated gimbal to maximize stability and weight efficiency while minimizing space. When no GPS signal is available, Vision Positioning technology provides hovering precision.

2. Reference *Inspire 1 Maintenance Manual v1.0*

3. Reference *Inspire 1 User Manual (EN) v1.0 [FCC Compliance – Appendix Pg 62]*

Regarding the Unmanned Aircraft PIC

4. Operator proposes to operate its UASs with a pilot holding, at a minimum, a private pilot certificate.
 - The UAS PIC will be trained in advance for the safe operation of the UAS to be operated. This will include operation of the UAS both in normal and emergency modes of operation, and will include familiarization with the user manual published by the UAS manufacturer. Training will also include types of maneuvers to be performed and the safe operation in relation to persons, property and applicable airspace.
 - The PIC must have accumulated a minimum of 100 flight cycles and 25 hours of total time as a UAS pilot and at least 10 hours logged as a UAS's pilot with a similar UAS type.
 - All operations must utilize Visual Observers (VOs). VOs who are not pilots will attend ground training to understand the roles of an observer, communication procedures, and proper visual scan techniques, operations at non-towered airports, and appropriate sections of the Aeronautical Information Manual.
5. The PIC must possess at least a third-class airman medical certificate for all of petitioner's flight operations.

Regarding the Operation of the Unmanned Aircraft

6. Operator proposes Civil Commercial operation of an UAS to operate in the following manner:
 - Aerial photography and/or video for public and/or private use including real estate, architecture, land surveying, engineering and other related professional activities.
 - Aerial video and/or photography for public and/or private use including television, public events, cinematography and news gathering.
 - Aerial inspection/photography of residential/commercial structures under contract with the owners or local government authority.

- Aerial inspection/photography of residential/commercial utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers.
 - Aerial video/photography or providing live video feed (so as long as all other parameters are met contained herein) to assist with search and rescue operations in cases of an emergency or natural disaster only when the local authorities or government has requested it by contract or donation.
 - The ability to offer training to persons individually or belonging to both private and/or public organizations that have interests in the use and application of a UAS for the purpose of the safe operation of a UAS to enhance the safety of the National Airspace System (NAS) as well as for the protection of the persons and property.
 - For additional operator adherence:
 - Reference – *Inspire 1 Safety Guidelines v1.0*
7. The UAS may not be flown at an indicated airspeed exceeding 29 knots (15 m/s). The UAS must be operated at an altitude of no more than 400 feet above ground level (AGL). The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1.
- All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.
 - A briefing will be performed regarding the planned UAS operations prior to each day's flight consisting of all the days' production activities.
 - Flights will be terminated at 20% battery power.
8. As described fully above, the requested exemption would permit the operation of an UAS under controlled conditions in the NAS that would be a) limited b) controlled c) predetermined and d) will provide safety enhancements to the already safe operations in the industry presently 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."

Given the small size of the UAS and the controlled environment provided, the proposed operations will adhere to the Reform Act's safety requirements. The approval of this application presents no national security issues. Regarding the

level of safety surrounding the proposed operations and the public benefit, reduction in environmental impacts, including but not limited to reduced emissions and noise, the grant of the requested exemption is in the public interest.

9. The UAS may not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart unless a letter of agreement with the airport's management is obtained, and the operation is conducted in accordance with a Notice to Airmen (NOTAM), as required by the operator's COA.
10. The UAS 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.
11. Reference – *Inspire 1 Safety Guidelines v1.0*
12. Operator's Point of Contact – Mr. Chris Doherty

North Texas FSDO
8700 Freeport Parkway
Suite 225
Irving, TX 75063

13. Operator will obtain required COAs once exemption is granted.

Exemption Requests and Equivalent Level of Safety

14 CFR Part 21, Subpart H: *Airworthiness Certificates* 14 CFR § 91.203 (a)(1)

Based on the limited size, weight, operating conditions, design safety features, and the imposed conditions and limitations, Operator has demonstrated that its operations would not adversely affect safety compared to similar operations conducted with aircraft that have been issued an airworthiness certificate under 14 CFR part 21, Subpart H. Therefore, as the FAA found for Astraeus Aerial, Exemption 11062, the requested relief from 14 CFR Part 21, and any associated noise certification and testing requirements of part 36, is not necessary.

14 CFR § 45.23 (b) – *Display of marks*

Since Operator's UAS has no entrance to the cabin, cockpit, or pilot station on which the markings can be placed, two inch lettering will be impossible. Official marking systems for small UAS have not yet been established for operations inside the NAS.

Operator is prepared to mark the UAS with the name of the organization and location nor origin and fulfill any other request by the FAA to this topic in accordance with 45.29 (f) where the pilot, observer, and others working with the sUAS will see the identification of the sUAS. The FAA has issued the following exemptions to this regulation, see Exemption Nos. 8738, 10167, 10167A and 10700.

14 CFR § 61.113 (a) & (b) - *Private pilot privileges and limitations*

This regulation provides:

- (a) This regulation provides that no person that holds a private pilot certificate may act as pilot in command of an aircraft for compensation or hire.
- (b) This allows a private pilot to act as pilot in command of an aircraft in connection with any business or employment if: (1) The flight is only incidental to that business or employment; and (2) The aircraft does not carry passengers or property for compensation or hire.

All the requirements of a private pilot certificate will prepare the UAS operator for the environment that they will be operating in.

*Please reference Grant of Exemption No. 11062 to Astraeus Aerial (Astraeus), the FAA determined that a PIC with a private pilot certificate operating a UAS would not adversely affect operations in the NAS or present a hazard to persons or property on the ground.

14 CFR § 91.7 (a) & (b) - *Civil aircraft airworthiness*

This regulation provides:

- (a) No person may operate a civil aircraft unless it is in an airworthy condition.
- (b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

While the operator's UAS will not require an airworthiness certificate, operator is required to ensure that its aircraft is in an airworthy condition – based on compliance with the operating documents prior to every flight. As previously determined with Astraeus Aerial, Exemption 11062, relevant materials may be kept in a location accessible to the PIC in compliance with the regulations.

14 CFR § 91.9 (b)(2) - *Civil Aircraft Flight Manual, marking, and placard requirements*

14 CFR § 91.203 (a) & (b) - *Civil aircraft: Certifications required*

As previously determined with Astraeus Aerial, Exemption 11062, relief from these sections are not necessary. Relevant materials may be kept in a location accessible to the PIC in compliance with the regulations.

14 CFR § 91.109 - *Flight instruction: Simulated instrument flight and certain flight tests*

This regulation provides that "No person may operate a civil aircraft that is being used for flight instruction unless that aircraft has fully functioning dual controls."

The controls for a UAS do not currently have a set of fully functioning dual controls. If a UAS's pilot is being trained, the pilot performing the training would be directly supervising and could take over the controls from the pilot in training if the need arose. This would be similar to the technique of a "throw-over type" control wheel in some fixed wing aircraft. We feel that this technique meets the intent 91 .109 and provides an equivalent level of safety.

14 CFR § 91.119 - *Minimum safe altitudes*

This regulation provides that over sparsely populated areas the aircraft cannot be operated closer than 500 feet to any person, vessel, vehicle, or structure.

Since the typical mission of this UAS would be photography or survey of persons, vessels, vehicles or structures it would be necessary to operate closer than 500 feet to the items listed. Operations will only be flown over property or persons where permission has been obtained, and careful pre-planning has been performed. Further, UAS aircraft operate at a very slow airspeed, and a low mass, and do not need as much space to operate safely, as outlined in 91.119. We believe the slower speed, smaller mass and careful pre-planning would provide an equivalent level of safety. Furthermore, Operator can place barriers and/or structures to sufficiently protect nonparticipating person from the UA or debris in the event of an accident.

14 CFR § 91.121 - *Altitude settings*

This regulation provides that aircraft shall maintain cruising altitudes by reference to an altimeter setting available within 100 nautical miles of the aircraft.

The UAS will normally be flying close to the ground, and in line of sight of the PIC or an observer. This line of sight operation will provide separation from other aircraft, obstructions and terrain providing an equivalent level of safety. Additionally, the altitude information generated by onboard GPS equipment installed on the aircraft will aid in estimating the altitude.

14 CFR § 91.151 - *Fuel requirements for flight in VFR conditions*

This regulation provides that no person may begin a flight in an airplane under day-VFR conditions unless there is enough fuel to fly to the first point of intended landing and to fly after that for at least 30 minutes. We feel the intention of this paragraph is to provide a reasonable reserve of energy to plan for a safe landing should there be a delay in landing. Given the close proximity to the ground station, the ability for the UAS to land in a very small space and the built in energy level monitoring of the UAS there is a resulting equivalent level of safety if the flight is planned to be completed with 20% battery energy remaining. We request an exemption to the word "fuel" and ask for an equivalent interpretation with the word "energy".

14 CFR § 91.205 (b) – *Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements*

Since the Operator's UAS does not have a standard category U.S. airworthiness certificate, relief from 14 CFR § 91.205 is not necessary.

14 CFR § 91.215 - *ATC transponder and altitude reporting equipment and use*

Section 91.215 (b)(3) includes provision for aircraft not originally certificated with an engine-driven electrical system or which has not subsequently been certified with such a system installed. For UAS not equipped with a transponder, sub-paragraph (d)(3) authorizes requests for ATC authorized deviations made to the ATC facility having jurisdiction over the concerned airspace within the time periods specified. For operation of an aircraft that is not equipped with a transponder, the request must be made at least one hour before the proposed operation.

14 CFR § 91.401 – 91.417 – *Maintenance, preventive maintenance, and alterations*

This regulation provides that the operator is primarily responsible for maintaining the aircraft in an airworthy condition, including compliance with part 39 and 43.

Operator believes that adherence to their documents containing preflight and post-flight checks for the UAS is sufficient to ensure that safety is not adversely affected.

Respectfully,

/s/

Josh Taylor

Owner, Vertical Approach Aerial Solutions, LLC

Phone: 817.781.8515

e-mail: josh@verticalapproach.com