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

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

May 15, 2015

Exemption No. 11597
Regulatory Docket No. FAA–2015–0476

Mr. David J. Forker
Snake River Search, Inc.
P.O. Box 1663
Idaho Falls, ID 83403

Dear Mr. Forker:

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 posted to the docket on February 26, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Snake River Search, Inc. (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct search operations for missing persons.

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 Phantom II Vision-Plus.

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. 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, Snake River Search, 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. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Snake River Search, 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 Phantom II Vision-Plus 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 5 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.ntsb.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 May 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

Snake River SEARCH, Inc.
P.O. Box 1663 ● Idaho Falls, Idaho ● 83403-1663 http://www.snakeriversearch.org

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

RE: Exemption Request under Section 333 of the FAA Modernization and Reform Act and 14 C.F.R. Part 11

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, Snake River Search, Inc. (a 501(c)3 non-profit corporation), seeks an exemption from the Federal Aviation Regulations (FARs) listed and discussed in Appendix A in order to allow for the operation of small Unmanned Aircraft Systems (UAS) under the conditions and limitations set forth in this application for Petition.

Snake River Search requests the exemption to permit the operation of small Unmanned Aircraft Systems to support search operations for missing persons. We believe that the use of UAS will enhance both the success of the search and the safety of the searchers in the wilderness areas that we typically operate in.

The requested exemption would authorize Snake River Search to perform operations with the UAS that will benefit the public as follows:

> Acquire real-time aerial views of search areas that are difficult or dangerous to access on the ground. Real-time information can be used to direct ground teams to areas of interest. Water searches in river sections that are too rough for divers or boats, or on remote waters where the UAS can be packed in.
>
> Acquire digital imagery which can be analyzed using computer systems, either on site, or utilizing crowd analysis via the web.

The use of the UAS will significantly reduce the risk to the searchers while increasing the likely-hood of a positive outcome.

Snake River SEARCH, Inc.
P.O. Box 1663 ● Idaho Falls, Idaho ● 83403-1663 http://www.snakeriversearch.org

Statement of Background and Public Benefit

Snake River Search, Inc. (a 501(c)3 non-profit corporation) traces its origins to the Bonneville County Jeep Patrol founded in 1958 to support wilderness searches for missing persons. Currently Snake River Search has six K9 search teams, man-trackers, a Fusion Center with advanced mapping and analysis capabilities, as well as communications capabilities. The UAS Lead is a retired USAF Navigator and Private Pilot who has extensive experience with airspace management and remote sensor operations. Other members include pilots, a PhD in Engineering and Applied Sciences, and many engineers. All members have passed a background check and most currently do or have held DOE and/or DOD security clearances. All members are volunteers and none receive monetary gain.

Operations will be purely for the benefit of the public and no payment will be requested for services provided.

The use of the UAS will significantly improve our ability to conduct searches for missing persons in the remote wilderness areas within our operational arena.

All imagery collected will be utilized solely for the purpose of search operations and training, and none will be released without a thorough review.

The physical risk to the public is minimal and is easily off-set by the benefits of quickly locating missing persons and the reduced risk to the search personnel.

Qualification for Approval under Section 333 of The Reform Act

The UAS operations proposed in this application of petition for exemptions qualify for expedited approval under Section 333 of the Reform Act. This petition outlines how each statutory criteria and other potentially relevant factors are satisfied.

The proposed operations would permit the use of small UAS within the National Airspace (NAS) under controlled operational conditions.

Snake River Search is proposing to operate Quad-Copter rotorcraft that will weigh less than 5lbs in flight condition. Operations would occur under normal VFR conditions and at speeds less than 30mph. (the UAS that will be used is the DJI Phantom II Vision-Plus.) Operations will be conducted by qualified operator/observer teams to maximize operational success and safety. For both operational and safety reasons the UAS will operate at less than 400' AGL and within visual sight. The systems will include fail-safe fly-home capability and software preventing operations in controlled/restricted airspace will be utilized.

Pertaining to the UAS:

UAS will weigh typically less than 3 lbs., and always less than 10 lbs.

UAS will operate at a maximum speed of no greater than 30mph.

UAS will operate below 400ft AGL.

UAS shall not be operated within 5 miles of an airport without prior approval of, and establishing a line of communication for the duration of the flight operations with the controlling authority of that airspace/airport.

UAS will be operated within visual line of sight (VLOS) of the PIC and VO(s).

UAS will follow pre-determined flight paths over the mission area conducted via automated navigational flight software.

UAS will be operated under visibility and cloud clearance requirements equivalent to Visual Flight Rules (VFR).

UAS will be equipped with an autopilot system. UAS will utilize GPS navigation, systematic pre-flight checks, and failover safety mechanisms including return-to-home (RTH), auto-land, loiter and flight abort safety features.

Pertaining to Pilots, Visual Observer(s) and Ground Control Station crew:

Minimum crew for each operation will consist of the UAS Pilot in Command (PIC), Visual Observer (VO) and/or Ground Control Station (GCS) crew.

The UAS pilot will be considered the Pilot in Command (PIC) and be responsible for conducting safe flight operations.

The UAS PIC will have an FAA aviation certification.

VO and GCS personnel will complete training equivalent to a Private Pilots Ground school prior to operational deployment in addition to training on the hardware and software being utilized, and mission oriented operational requirements.

PIC, VO(s) and/or GCS crew will have communications established in advance of any flight operations.

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 procedures and will include familiarization with the flight manual (or similar) furnished by the UAS manufacturer. Training will include basic flight maneuvers, navigational awareness, emergency procedures, loss of uplink, loss of downlink, loss of GPS and safe flight operations in relation to persons, property and applicable airspace. Training will include a minimum of 100 takeoff/landing cycles, 25 hours of total time as a UAS rotorcraft pilot and at least 10 hours logged as a UAS pilot with a similar UAS type. Prior to operational employment the PIC must have accumulated and logged a minimum of 5 hours as UAS PIC operating the make and model of UAS to be utilized as well as 10 takeoffs and landings in the preceding 90 days. Specific training will include normal and emergency modes of operation and will include familiarization with the operation manual published by the UAS manufacturer. Training will also include types of maneuvers to be performed during operations including safe operation in relation to persons, property and applicable airspace.

UAS PIC will establish a working relationship with a representative at the local Flight Standards district Office (FSDO) with which to annually review safety procedures and other operations to further enhance safety.

Pertaining to Flight Operations:

Safety is paramount and risk assessment evaluations will be conducted for safe site operations and flight conditions before each mission.

A briefing will be conducted in regard to the planned UAS flights prior to operation at each new location. All personnel who will be performing duties within the boundaries of the area of operation will be present for this briefing.

Prior to a UAS flight, an area of operation will be established. This area of operation will include a defined lateral and vertical area, where the UAS will operate. Safety procedures will be established for persons, property and applicable airspace within the area of operation.

Flights will be operated in Class G airspace whenever possible. If operation in other airspace is required, the appropriate controlling authority will be notified at least 24 hours prior to the operation and, if required, any necessary permission obtained.

See and avoid: If at any time the operator see or hears another aircraft and it appears that aircraft may come within one (1) mile of the UAS, or it is questionable whether or not it will do so, the PIC shall immediately descend the UAS and direct it on a heading toward the designated landing area, or an alternate landing area if necessary, until the UAS has landed or it is determined the other aircraft has maintained a separation of one (1) mile.

The UAS shall operate from on-site launch/landing locations directly next to the PIC and GCS crew. Non-essential flight operation personnel will be at an appropriate distance away or a minimum of 50ft from the operation unless barriers or structures are in place which may sufficiently protect observers or other personnel in case of UAS emergency.

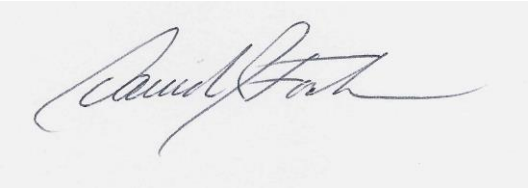
Flight planning will include flight completion with at least 25% battery power remaining as measured by the UAS or appropriate flight time planning.

A Ground Control Station (GCS) will be connected by radio communication to the UAS during the entire flight operation. Flight information relayed to the PIC will include UAS GPS position, altitude, speed, compass heading/bearing, aircraft angle of attack, flight time, battery power remaining, and other telemetry information.

Written, and/or documented oral permission from property owners or land management agency will be obtained prior to an operation as required.

In summary, it is the Applicant's belief that the size, weight, speed, operating environment, and operating capabilities of each UAS will provide an "equivalent level of safety" or better when operating for commercial and public interest as outlined in Section 333 of the Reform Act. Applicant appreciates the time and consideration given to this request for exemption to permit safe and legal UAS operations within the NAS.

Respectfully,



Snake River Search, Inc.
Attn: David J. Forker
Telephone: (208)589-0533
Email: DJFOR@SARDALE.COM
P.O. Box 1663, Idaho Falls, ID 83403

Attch: Glossary of Terminology
Appendix A – Exemption Requests

GLOSSARY OF TERMINOLOGY:

COA	Certificate of Authorization
FAA	Federal Aviation Administration
FLIR	Forward Looking Infrared
GIS	Geographic Information Systems
GPS	Global Positioning System
GCS	Ground Control Station
NAS	National Airspace
NIR	Near- Infrared
NOTAM	Notice to Airmen
PIC	Pilot in Command
RS	Remote Sensing
TIR	Thermal Image Recorder
VFR	Visual Flight Rules
VLOS	Visual Line of Sight
VO	Visual Observer
UAS	Unmanned Aircraft System

APPENDIX A

EXEMPTION IS REQUESTED FROM THE FOLLOWING REGULATIONS:

Part 21 prescribes the procedural requirements for issuing and changing design approvals, productions approvals, airworthiness certificates, and airworthiness approvals.

Exemption Requested Because: Should not apply to small UAS.

Section 45.23(b) prescribes that 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.

Exemption Requested Because: Physically impossible to implement on a small UAS

Section 45.29(b)(iii) prescribes, in pertinent part, that marks at least 3 inches high may be displayed on an aircraft for which the FAA has issued an experimental certificate under §21.191(d), § 21.191 (g), or § 21.191(i) of this chapter to operate as an exhibition aircraft, an amateur-built aircraft, or a light-sport aircraft when the maximum cruising speed of the aircraft does not exceed 180 knots calibrated airspeed.

Exemption Requested Because: Physically impossible to implement on a small UAS

Section 91.9(b)(2) prohibits operation of U.S.-registered civil aircraft 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. Exemption Requested Because: Physically impossible to implement on a small UAS

Exemption Requested Because: Should not apply to small UAS.

Section 91.109(a) prescribes, in pertinent part, 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.

Exemption Requested Because: Physically impossible to implement on a small UAS

Section 91.119 prescribes that, except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) Anywhere. At an altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(d) Helicopters, powered parachutes, and weight-shift-control aircraft. If the operation is conducted without hazard to persons or property on the surface—

(1) A helicopter may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section, provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA,

(2) A powered parachute or weight-shift-control aircraft may be operated at less than the minimums prescribed in paragraph (c) of this section.

Exemption Requested Because: For operational and safety reasons the UAS needs to operate below 400' AGL at all times.

Section 91.121 requires, in pertinent part, 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."

Exemption Requested Because: The UAS will utilize GPS for altitude control.

Section 91.151(a) prescribes that 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, during the day, to fly after that for at least 30 minutes .

Exemption Requested Because: Flights will be within visual sight, will typically last less than 30 minutes, and battery level will be monitored to ensure a safe UAS recovery.

Section 91.203(a) prohibits, in pertinent part, any person from operating a civil aircraft unless it has within it (1) an appropriate and current airworthiness certificate; and (2) an effective U.S. registration certificate issued to its owner or, for operation within the United States, the second copy of the Aircraft registration Application as provided for in § 47.31(c).

Exemption Requested Because: Physically impossible to implement on a small UAS

Section 91.203(b) prescribes, in pertinent part, that no person may operate a civil aircraft unless the airworthiness certificate 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.

Exemption Requested Because: Physically impossible to implement on a small UAS

Section 91.405(a) requires, in pertinent part, that an aircraft operator or owner shall have that aircraft inspected as prescribed in subpart E of the same part and shall, between required inspections, except as provided in paragraph (c) of the same section, have discrepancies repaired as prescribed in part 43 of the chapter.

Exemption Requested Because: Inspections of small UAS will be limited to operational checks of the hardware and software prior to each flight.

Section 91.407(a)(1) prohibits, in pertinent part, any person from operating an aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless it has been approved for return to service by a person authorized under § 43.7 of the same chapter.

Exemption Requested Because: Small UAS do not present the same risks as manned aircraft and require minimal maintenance. Alterations from manufacturer configuration will not be made.

Section 91.409(a)(2) prescribes, in pertinent part, that no person may operate an aircraft unless, within the preceding 12 calendar months, it has had an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

Exemption Requested Because: A COA will be requested and maintained as directed/required.

Section 91.417(a) and (b) prescribes, in pertinent part, that—

(a) Each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—4

(i) A description (or reference to data acceptable to the Administrator) of the work performed; and

(ii) The date of completion of the work performed; and

(iii) The signature, and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information:

(i) The total time in service of the airframe, each engine, each propeller, and each rotor.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives (AD) and safety directives including, for each, the method of compliance, the AD or safety directive number and revision date. If the AD or safety directive involves recurring action, the time and date when the next action is required.

(vi) Copies of the forms prescribed by § 43.9(d) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

(b) The owner or operator shall retain the following records for the periods prescribed:

(1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(3) A list of defects furnished to a registered owner or operator under5

Exemption Requested Because: These records would serve no purpose in enhancing the safe operation of the small UAS

§ 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

Exemption Requested Because: These records would serve no purpose in enhancing the safe operation of the small UAS

FAA Notice 8900.227, paragraph 16.c.(4), *PIC Medical*, states that the PIC must maintain, at a minimum, a valid FAA second-class medical certificate issued under 14 CFR part 67, Medical Standards and Certification, or the FAA-recognized equivalent.

Exemption Requested Because: The medical certificate is predicated on manned flight.

Paragraph 16.e.(1), *Medical*, states that all observers must have a valid FAA second-class medical certificate issued under part 67; an FAA-recognized equivalent is an acceptable means of demonstrating compliance with this requirement.

Exemption Requested Because: The medical certificate is predicated on manned flight.