Exemption No. 11111

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20591

In the matter of the petition of **WOOLPERT, INC.** for an exemption from §§ 21.185; 45.23(b); 91.9(b); 91.203(a) and 91.203(b) of Title 14, Code of Federal Regulations	**Regulatory Docket No. FAA-2014-0506**

GRANT OF EXEMPTION

By letter dated July 17, 2014, Mr. Gregory S. Winton and Mr. Jared M. Allen of The Aviation Law Firm, Counsel for Woolpert, Inc., 1997 Annapolis Exchange Parkway, Suite 300, Annapolis, Maryland 21401, petitioned the Federal Aviation Administration (FAA) on behalf of Woolpert, Inc. (Woolpert) for an exemption from §§ 21.185, 45.23(b), 91.9(b), and 91.203 (a) and (b) of Title 14 of the Code of Federal Regulations (14 CFR). The exemption would allow operation of unmanned aircraft systems (UAS) for the purpose of precision aerial surveys.

The petitioner requests relief from the following regulations:

Section 21.185 prescribes, in pertinent part, the procedural requirements for issuing restricted category aircraft airworthiness certificates.

Section 45.23(b) prescribes, in pertinent part, 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.

Section 91.9(b) in pertinent part 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.

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).

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.

The petitioner supports its request with the following information:

The petitioner has provided the following information – contained in its petition and supplemental proprietary exhibits: 1) Altavian Nova F6500 Operator Manual, 2) Woolpert UAS Safety Management System, and 3) Woolpert UAS Operations Manual (hereafter collectively referred to as the operator's guide) – in support of its exemption request. The FAA has organized the petitioner's information into four sections: 1) the unmanned aircraft system, 2) the UAS Pilot in Command (PIC), 3) the UAS operating parameters, and 4) public interest.

<u>Unmanned Aircraft System (UAS)</u>

The UAS proposed by the petitioner is an Altavian Nova Block III UAS, Serial No. 3001, registration number N937RW and referred to as the *Nova Block III*. This system is comprised of an unmanned aircraft and a transportable ground station. The Nova Block III has a maximum gross weight of about 15 pounds with a wingspan of 108 inches and a length of 65 inches. It is equipped with a single propeller driven by an electric motor powered by a lithium polymer battery. The petitioner states that an exemption from § 21.185, subject to certain conditions and limitations, is warranted and meets the requirements for an equivalent level of safety under 14 CFR part 11 and Section 333 of the FAA Modernization and Reform Act of 2012 (PL 112-95), subject to the following considerations:

- The safe operational history and current use of the Nova Block III UAS in the NAS;
- The characteristics of the Nova Block III UAS (including size, weight, and speed);
- The limited areas of Woolpert's intended operations, not in the proximity of airports or over populated areas;
- Conducting operations of the Nova Block III UAS pursuant to Woolpert's Safety Management System;
- Conducting operations of the Nova Block III UAS within the line of sight of a commercial certificated pilot with a safety observer; and

- Conducting operations in accordance with the operating limitations identified by Woolpert in its petition.

The petitioner states that the unmanned aircraft (UA) to be operated under this request flies at a speed of no more than 58 knots, carries neither a pilot nor passenger, and operates exclusively within a limited area as set out in their petition. In addition, the petitioner has integrated a variety of operating/safety restrictions into its operations as described in the petitioner's operator's guide to ensure the safety of persons and property within and surrounding the limited operating area. The petitioner further describes that, in the event the UAS loses communications or its GPS signal, the PIC will execute emergency flight termination procedures and notify Air Traffic Control, the airspace manager, and all local authorities per local requirements.

The petitioner states that even though its UAS will have no airworthiness certificate, an exemption may be needed from 14 CFR 45.23 as the UA will have no entrance to the cabin, cockpit, or pilot station on which the aircraft type certificate can be placed. The petitioner asserts that an equivalent level of safety will be provided by having the UA marked with the word "restricted" on the fuselage in compliance with § 45.23(b), in a location where the pilot, observer, and others working with the UA will see the identification.

The petitioner states that maintenance will be performed by the Nova UAS technical lead (TL) and the Pilot in Charge (PIC). This includes conducting all maintenance and upkeep required to ensure the safe operation of the Nova Block III and authorizing use of the UA based upon completion of appropriate inspection(s) such as pre-flight.

<u>UAS Pilot in Command (PIC)</u>

The petitioner asserts all operations of the NOVA Block III will be conducted by a designated PIC who shall hold a current commercial pilot certificate with a valid first or second class airman medical certificate. In addition to the PIC, the crew is complemented by a safety observer (hereafter the Visual Observer (VO)). The VO will initially launch the vehicle before turning it over to the PIC, monitor the authorized airspace to identify errant aircraft or unsafe conditions that might exist during the flight, maintain constant verbal communication with the PIC to alert him/her to changing conditions, and in the event of an emergency, calling the appropriate agency overseeing the airspace.

<u>UAS Operating Parameters</u>

The petitioner states that all flights will be operated over certain rural areas in the state of Ohio that are not near populated areas, airports, helipads, or state roads. Specifically, Woolpert's proposed area of flight operations over the state of Ohio includes rural areas that are:

1. Not populated areas as depicted on VFR Sectional Aeronautical Charts;
2. Not within five (5) miles of any airport or helipad;

3. Not within one hundred (100) meters (approximately 320 feet) of state roads having more than two lanes; and
4. Not within fifty (50) meters (approximately 160 feet) of state roads having two lanes or less.

The petitioner states that all flight operations will be conducted in accordance with 14 CFR 91.119, *Minimum safe altitudes: General*.

Woolpert submits that approximately 15,919 square miles, or approximately thirty-five percent (35%) of the total area of the state of Ohio would qualify as rural areas over which Woolpert could perform aerial acquisition flight operations pursuant to the requested exemption. Further, the petitioner states that the NOVA Block III will be operated within one mile and within visual line of sight (VLOS) of the pilot and safety observer, and that the UAS will be limited to a maximum altitude of 400 feet AGL, and under day visual flight rules in visual meteorological conditions. Woolpert states in summary that it seeks to operate its Nova Block III UAS only over rural areas of Ohio, while maintaining safe distances from any populated areas, airports, helipads, or roadways.

Public Interest

The petitioner states that granting their petition for exemption will further the public interest by allowing Woolpert to safely, efficiently, and economically perform aerial acquisition and research over the state of Ohio in support of government entities, agriculture, scientific studies, wildlife monitoring, and forestry, while also furthering the development of the state economy related to the oil and gas industries. Additionally, the petitioner states that use of the Nova Block III UAS will decrease congestion of the NAS, reduce pollution, and provide significant benefits to the economy. The petition further notes that the benefits of the proposed operation of the Nova Block III UAS will be realized without implicating any privacy issues.

Discussion of Public Comments:

A summary of the petition was published in the Federal Register on August 22, 2014 (79 FR 49830).

The FAA received two comments on this petition, one favorable from the Small UAV Coalition and one unfavorable submitted anonymously.

The Coalition notes that although Woolpert's proposed small UAV operations may pose no greater risk than small UAVs that are used by hobbyists and modelers (because of weight, altitude, etc.), Woolpert has proposed to abide by much stronger safety measures than are required for these groups. The Coalition asserts that small UAVs that operate for any purpose, commercial or non-commercial, should be judged based upon the precautions taken for safe

operation, taking into consideration the relevant technical parameters of the UAV and UAS. The FAA has considered risk and risk mitigation in its analysis below.

The anonymous commenter identified several issues including: how pilots in manned airplanes will see and avoid the UA, how ATC will see the UA without a radar signature, the length of each UA flight, and how far the UA will travel if communications are lost.

The FAA notes that the petitioner addressed issues related to see and avoid and ATC's inability to see the UA in its petition. For example, the operator's guide describes procedures conducted by the PIC and the VO to see and avoid air traffic that may be operating in the same are. Related to Air Traffic Control awareness of operations, the petitioner will coordinate and establish two-way communications with the nearest Air Traffic Control Facility whenever during all operations. The FAA also addressed these issues within the conditions and limitations including: issuance of a NOTAM prior to all flights, that the UA must always yield the right-of-way to manned aircraft and that all operations will require a certification of authorization (COA) from the FAA Air Traffic Organization. Regarding potential loss of the communications link, the Nova Block III has design provisions to reduce the potential for loss of positive UA control and operational procedures in the event of such an occurrence.

The FAA's analysis is as follows:

<u>Unmanned aircraft system (UAS)</u>

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts*. In accordance with the statutory criteria provided in Section 333 of P.L. 112-95 in reference to 49 USC § 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. Because the Secretary of Transportation has determined that no airworthiness certificate is required the requested relief from 14 CFR part 21, and any associated noise certification and testing of part 36 is not necessary.

Aerial survey operations with manned aircraft are typically conducted with aircraft holding standard airworthiness certificates issued under part 21, subpart H. These aircraft are normally modified via the supplemental type certificate (STC) process to install cameras and other equipment not included in the original aircraft design.

Manned aircraft conducting aerial surveying operations can weigh 5,000 to 7,000 lbs. or more, are operated by an onboard pilot and may carry other onboard crewmembers, as well as carry 100-200 gallons or more of fuel. The petitioner's UA will weigh less than 15 lbs. The pilot and crew will be remotely located from the aircraft. The limited weight and construction reduces the potential for harm to persons or damage to property in the event of an incident or

accident. The risk to an onboard pilot and crew during an incident or accident is negligible with the use of a UAS for the aerial surveying operation.

Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. The Nova Block III carries no fuel and therefore the risk of fire following an incident or accident due to fuel spillage is eliminated.

The FAA notes that the petitioner's UAS has the capability to operate safely after experiencing certain in-flight contingencies or failures and uses an auto-pilot system to maintain UAS stability and control. The UAS is also able to respond to a loss of GPS or a lost-link event with pre-coordinated automated flight maneuvers.

Regarding the petitioner's requested relief from 14 CFR 45.23(b) *Display of marks*, the petitioner requests this relief under the assumption that marking with the word "restricted" will be required as a condition of a grant of exemption. However, this marking is reserved for aircraft that are issued restricted certificates under 14 CFR 21.185. The petitioner's UAS will not be certificated under § 21.185, and therefore the "restricted" marking is not required. Since the petitioner's UAS will not be certificated under § 21.185, a grant of exemption for § 45.23(b) is not necessary.

<u>Pilot in Command (PIC) of the UAS</u>

The PIC will be a current commercially rated pilot and hold a valid first or second class airman medical certificate and comply with all training and currency requirements in the operator's guide, prior to operations.

<u>Operating parameters of the UAS</u>

Regarding the petitioner's requested relief from§§ 91.9(b)(2) *Civil aircraft flight manual, marking, and placard requirements* and 91.203(a) and (b) *Civil aircraft: Certifications required*, the FAA has previously determined that relief from these sections is not necessary. Relevant materials may be kept in a location accessible to the PIC in compliance with the regulations. The operator's guide is an acceptable equivalent to the manual materials referenced in 14 CFR 91.9(b)(2) and adherence to the procedures within the operator's guide is required through the conditions and limitations below.

The petitioner did not seek relief from 14 CFR § 91.119 *Minimum safe altitudes: General.* However, the petitioner states that it will operate the Nova Block III UA at or below 400 feet above ground level (AGL) and pursuant to the following self-imposed, restrictions:

All operations will be within rural areas above the state of Ohio that are:

- Not populated areas as depicted on VFR Sectional Aeronautical Charts;
- Not within five (5) miles of any airport or helipad;

- Not within one hundred (100) meters of state roads having more than two lanes; and
- Not within fifty (50) meters of state roads having two lanes or less.

The FAA has reviewed these restrictions and finds that they are not sufficient to comply with § 91.119(c) which prohibits operations closer than 500 feet to any person, vessel, vehicle, or structure. Without a means to control or limit access to the operating areas, which could include roads occupied by persons and vehicles, operations must comply with § 91.119(c). In its exemption to Trimble Navigation (Docket No. FAA-2014-0367), Exemption No. 11110, the FAA found that avoidance of congested or populated areas, which are depicted in "yellow" on VFR charts, is a practicable step in assuring that operations are not conducted over congested or densely populated areas. However, using these "yellow" areas only, to make this determination, is not sufficient since there is no precise definition of a "congested area." The FAA has stated that while there is no precise definition of a "congested area," official U.S. Government aeronautical charts and NOTAMS provide general guidance for developing a proposed route that complies with § 91.119(c). Furthermore, aeronautical charts would not be expected to reflect all required local information. Pilots may obtain such information in a briefing from the local FSDO. This information along with the pilot's prior knowledge of the area and information the pilot obtains from other sources may require an adjustment to the planned flight path before or during flight. Ultimately, it is the pilot's responsibility to maintain the minimum safe altitudes required by § 91.119(c). *See* Legal Interpretation to Melvin O. Cintron, from Rebecca B. MacPherson (Aug. 28, 2012).

Therefore, operations within "yellow" areas as shown on World Aeronautical Charts (WAC), Sectional Aeronautical Charts (Sectionals), or Terminal Area Charts (TAC) are prohibited. In addition, operations over congested or densely populated areas other than those depicted in "yellow" are also prohibited as stated in the conditions and limitations below.

All nonparticipating persons, vessels, vehicles, and structures will be required to be at least 500 feet from flight operations. However, the FAA finds that the UA may be operated at distances less than 500 feet from unoccupied vessels, vehicles or structures owned by the land owner/controller when the land owner/controller grants such permission and operation closer to these structures presents no safety hazard to nonparticipating persons or property. With regard to operations in proximity of the PIC and VO, the UA may be operated closer than 500 feet when operationally necessary. However at no time can operations be conducted so close to present an undue hazard to the PIC or VO, per § 91.119(a).

The FAA finds that relief from § 91.119(c) to permit operations closer than 500 feet to participating persons, vessels, vehicles and structures, is warranted provided adherence to the procedures in the operator's guide and the FAA's additional conditions and limitations outlined below.

Additionally, in evaluating the petitioner's proposed operating parameters with regard to VLOS and a safe operating perimeter, the FAA considered operations from a moving device

or vehicle. Since the petitioner did not discuss provisions for these circumstances, the conditions and limitations below prohibit operations from moving devices or vehicles.

Regarding an Air Traffic Organization (ATO)-issued Certificate of Waiver or Authorization (COA), Section 333, in pertinent part, states that a determination must be made regarding which types of UAS operations do not create a hazard to users of the NAS. The majority of current UAS operations occurring in the NAS are being coordinated through Air Traffic Control (ATC) by the issuance of a COA. This is an existing process that not only makes local ATC facilities aware of UAS operations, but also provides ATC the ability to consider airspace issues that are unique to UAS operations. The COA will require the operator to request a Notice to Airman (NOTAM), which is the mechanism for alerting other users of the NAS to the UAS activities being conducted. Therefore, the FAA believes that adherence to this process is the safest and most expeditious way to permit Woolpert to conduct their proposed UAS operations. The conditions and limitations below prescribe the requirement for Woolpert to obtain an ATO-issued COA.

Public Interest

The FAA finds that a grant of exemption is in the public interest. The enhanced safety achieved using a 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. The proposed operations will provide benefits to agriculture, science, the environment, wildlife monitoring, forestry, and energy.

The table below summarizes the FAA's determinations regarding the relief sought by the petitioner:

Relief sought by petitioner (14 CFR)	**FAA determination (14 CFR)**
Part 21.185	Relief not necessary
45.23(b)	Relief not necessary
91.9(b)(2)	Relief not necessary
91.119(c)	Relief granted with conditions and limitations
91.203(a) and (b)	Relief not necessary

The FAA's 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, Woolpert, Inc. (Woolpert) is granted an exemption from 14 CFR § 91.119(c) to the extent necessary to allow Woolpert to operate the Altavian Nova Block III unmanned aircraft system for the special purpose of precision aerial surveys that consist of still photographs taken by an onboard camera. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

Relative to this grant of exemption, Woolpert is hereafter referred to as the operator.

The Woolpert UAS Safety Management System, the Woolpert UAS Operations Manual, and the Altavian Nova F6500 Operator Manual are hereafter collectively referred to as the operator's guide.

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 following aircraft described in the operator's guide which is a fixed-wing aircraft weighing less than 15 pounds: Woolpert Altavian Nova Block III (Nova Block III). Proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2) The Nova Block III UA may not be flown at an indicated airspeed exceeding 58 knots.

3) The Nova Block III UA must be operated at an altitude of no more than 400 feet above ground level (AGL). All altitudes reported to ATC must be in feet.

4) The Nova Block III UA must be operated within visual line of sight (VLOS) of the Pilot in Charge/Command (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.

5) All operations must utilize a Visual Observer/Observer (VO). 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. 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 functions prescribed in the operator's guide.

6) The operator's guide and this grant of exemption must be maintained 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 operator's guide, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operator's guide.

   The operator may update or revise its operator's guide. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator 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 amendment to their grant of exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operator's guide.

7) Prior to each flight the PIC must inspect the Nova Block III UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the Nova Block III UAS, the Nova Block III UA is prohibited from operating until the necessary maintenance has been performed and the Nova Block III UAS is found to be in a condition for safe flight. The Nova Block III Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

8) Any Nova Block III UAS 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. The PIC who conducts the functional test flight must make an entry in the Nova Block III UA aircraft record of the flight.

9) In addition to the pre-flight inspection section in the operator's guide, the preflight inspection must also account for all discrepancies, i.e. inoperable components, items, or equipment, not already covered in the relevant sections of the operator's guide.

10) The operator must follow the Nova Block III manufacturer's UAS aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.

11) Woolpert must carry out their maintenance, inspections, and record keeping requirements, in accordance with the operator's guide. Maintenance, inspection, and alterations must be noted in the aircraft logbook, including total flight hours, description of work accomplished, and the signature of the authorized Nova Block III Technical Lead or PIC returning the Nova Block III UAS to service.

12) Woolpert Nova Block III Technical Lead or PIC must make a record entry in the UAS logbook or equivalent document of the corrective action taken against discrepancies discovered between inspections.

13) Nova Block III Technical Lead, PIC, and VO, must receive and document training referenced in the operator's guide.

14) The UAS operated under this exemption must comply with all manufacturer System and Safety Bulletins.

15) The PIC must possess at least a FAA-issued commercial pilot certificate and a valid FAA-issued first or second class airman medical certificate. 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.

16) Prior to operating for hire, the PIC and VO must have successfully completed Woolpert's training syllabus as outlined in the operator's guide. In addition, the PIC and VO must also have successfully completed annual (recurrent) training in accordance with the operator's guide. A record of training must be documented and made available upon request by the Administrator. Prior documented flight experience that was obtained in compliance with applicable regulations may satisfy this requirement. Training, proficiency, and experience-building flights can also be conducted under this grant of exemption to accomplish the required flights and flight time.

17) If the Nova Block III UA loses communications or loses its GPS signal, it must return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operator's guide.

18) The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operator's guide.

19) The operator must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption. This COA will also require the operator to request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.

20) The Nova Block III UA 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.

21) Before conducting operations, the radio frequency spectrum used for operation and control of the Nova Block III UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

22) The documents required under14 CFR 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the Nova Block III UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

23) The Nova Block III UA must remain clear and yield the right of way to all other aircraft operations and activities at all times.

24) The Nova Block III UAS may not be operated from any moving device or vehicle.

25) Nova Block III UAS operations may not be conducted during night, as defined in 14 CFR 1.1.

26) All operations must be conducted under visual meteorological conditions (VMC). The Nova Block III 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.

27) The Nova Block III UA may not operate within 5 nautical miles of the geographic center of an airport as denoted on a current FAA-published aeronautical chart.

28) The Nova Block III UA may not be operated over congested or densely populated areas. These areas include but are not limited to the yellow areas depicted on World Aeronautical Charts (WAC), Sectional Aeronautical Charts (Sectionals), or Terminal Area Charts (TAC). However, aeronautical charts may not reflect pertinent local information. Ultimately, it is the PIC's responsibility to maintain the minimum safe altitudes required by § 91.119.

29) Operation of the Nova Block III UA must be conducted at least 500 feet from all persons, vessels, vehicles, and structures not directly involved in the operation.

30) Operations of the UA may be conducted at distances less than 500 feet from participating persons, vessels, vehicles or structures that perform an essential function in connection with these special purpose operations. Operations closer than 500 feet from the PIC, VO, operator trainees and essential persons, are permitted when operationally necessary; but never so close to present an undue hazard, per § 91.119(a).

31) Operations of the UA may be conducted at distances less than 500 feet from unoccupied vessels, vehicles or structures owned by the land owner/controller when the land owner/controller grants such permission and the PIC makes a safety assessment of the risk from operations closer to these objects.

32) All operations shall be conducted with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

33) 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 meeting the requirements of 49 CFR part 830 must be reported to the National Transportation

Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

Unless otherwise specified in this grant of exemption, the unmanned aircraft system (UAS), pilot in charge/command (PIC), and operator must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on December 31, 2016, unless sooner superseded or rescinded.

Issued in Washington, DC, on December 10, 2014.

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