

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
Washington, DC 20590
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October 15, 2014

Re: Petition for Exemption Under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations

Dear Madam, Sir,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act"), P.L. 112-95, "Special Rules for Certain Unmanned Aircraft Systems" and 14 C.F.R. Part 11, Roger W. Meyer PLS (Professional Land Surveyor), d.b.a. Montana Land Surveys ("MLS") providing land surveying services in Eastern Montana and North Dakota, seeks an exemption from the Federal Aviation Regulations ("FARs") and listed below:

- 14 C.F.R. Part 21
- 14 C.F.R. 45.23
- 14 C.F.R. 45.29
- 14 C.F.R. 61.23
- 14 C.F.R. 61.3
- 14 C.F.R. 61.113(a) & (b)
- 14 C.F.R. 61.133(a)
- 14 C.F.R. 91.7(a)
- 14 C.F.R. 91.9
- 14 C.F.R. 91.109(a)
- 14 C.F.R. 91.119
- 14 C.F.R. 91.121
- 14 C.F.R. 91.151(a)
- 14 C.F.R. 91.203
- 14 CFR Subpart E (91.401 - 91.417)

Summarized for purposes of Federal Register publication:

Applicant seeks an exemption from the following rules:

14 C.F.R. Part 21, 14 C.F.R. 45.23, 14 C.F.R. 45.29, 14 C.F.R. 61.23, 14 C.F.R. 61.3, 14 C.F.R. 61.113(a) & (b), 14 C.F.R. 61.133(a), 14 C.F.R. 91.7(a), 14 C.F.R. 91.9, 14 C.F.R. 91.109(a), 14 C.F.R. 91.119, 14 C.F.R. 91.121, 14 C.F.R. 91.151(a), 14 C.F.R. 91.203, 14 CFR Subpart E (91.401 - 91.417)

to operate commercially a small unmanned vehicle (55lbs or less) augmenting its land surveying operations.

Contact information for the Applicant is:

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The requested exemption would authorize Montana Land Surveys to perform commercial operations that would enhance its existing Surveying and Mapping services, including but not limited to imaging for Precision Agriculture applications, Digital Terrain Modeling, Infrastructure reconnaissance and inventory with GIS applications for Private, Local, State and Federal entities, Riparian Boundaries of State and Federal owned lands associated with navigable rivers, all of which have become of major importance in the area due to the economic impacts of a Bakken oil exploration and production in North Dakota and Montana.

These services will be augmented by use of either or all of the following:

- The eBee, a fixed wing UAV manufactured by SenseFly, A Parrot Company (“SenseFly”)
- The UX5, a fixed wing UAV manufactured by Trimble Navigation Limited (“Trimble”)

The requested exemption would authorize commercial operations using these UAVs for land survey applications. These operations will be subject to strict operating and conditions defined by the UAV manufacturer’s standards and procedures in order to ensure at least an equivalent level of safety to currently authorized operations using manned aircrafts.

Upon receipt of the exemption contemplated herein, MLS shall, if required, obtain a Certificate of Waiver or Authorization (COA) form the FAA Air Traffic Organization prior to conducting operation(s) in the NAS.

Further, the professional services to be augmented by the uses contemplated herein are, by law, performed under the supervision of a Registered Land Surveyor whom, by virtue of his or her experience and licensing, technical knowledge of GPS, plane geometry, trigonometry and spherical geometry along with a full understanding of the rights of all owners of property both above and below its limits, inherently and uniquely make MLS a particularly well suited entity for the safe and efficient commercial use of UAVs. In fact, certain aspects of the contemplated services using UAVs are regulated by State Law and Regulation promulgating the licensing of land surveyors.

By this petition, MLS seeks an exemption that will authorize it to use the eBee or UX5 for commercial purposes provided its operators comply with any terms and conditions of the FAA’s anticipated grant of exemption, including the procedures and requirements set forth in the respective manufacturer’s user manuals. MLS requests the FAA treat the eBee user manual and the Trimble user manual, as proprietary under 14 C.F.R. 11.35(b) and not include such documents in the public docket. These manuals are, by reference, incorporated herein and are part of existing Petitions for Exemption under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations, identified as follows:

- **Docket ID:**FAA-2014-0367
- **Petition of:** **Trimble Navigation Limited** for an exemption from portions of 14 C.F.R. Part 21;
- **Document Type:** Other
- **Document Subtype:** Petition(s)
- **Status:** Posted
- **Received Date:** May 30, 2014

AND

- **Docket ID:**FAA-2014-0727
- **Petition of:** **SenseFly, LTD** for an exemption from portions of 14 C.F.R. Part 21;
- **Document Type:** Other
- **Document Subtype:** Petition(s)
- **Status:** Posted
- **Received Date:** May 30, 2014

Under the requested exemption, MLS as operator of the eBee and the UX5 will ensure that the aircraft will be operated, under the direct supervision of a Registered Professional Land Surveyor and by an individual who has completed the UAV manufacturer's training program for operation of the UAS.

1. CHARACTERISTICS OF THE AIRCRAFT

Both the eBee and the UX5 are a small and ultra-light platform that perform precision aerial mapping missions using onboard GPS and related proprietary flight management software that allows the operator to plan safely and efficiently a mission in 3D, and then monitor it in real-time. An embedded camera, protected by a foam envelope, takes a collection of high-definition still images that are used later to generate photographs, maps and contour lines of the surveyed area.

The four main characteristics of the UAVs are:

a. Very light weight

The vehicles are so light enough that the operator can launch it by hand and let it land on almost any surface without requiring a parachute or landing net (belly land). Their low kinetic energy also significantly reduces the risk of hazardous situations. Finally, wings are detachable and made of flexible foam with no sharp or hard edges and almost no internal strengthening structure.

b. Electric-powered

The UAVs are electric-powered. A brushless engine technology makes it silent and reliable. The propeller can easily flex away in case of contact with any object.

c. Semi-automatic flight

The artificial intelligence incorporated within the UAVs autopilot system continuously analyzes data from the Inertial Measurement Unit and from the onboard GPS and takes care of all the aspects of the flight under the supervision of the operator.

d. Option for Manual control

Additionally, the UAVs provide an override capability that allows the operator to take manually initiate autonomous actions during the flight such as "return home", "land" or, "hold and resume the mission". The operator can also suspend automated operations and take manual control of the aircraft should it become necessary to respond emergency circumstances, thanks to the remote controller provided with the system.

2. APPLICATIONS AND ADDED VALUE OF THE UAVs

Mapping applications may include agricultural applications, mining, construction and survey/GIS operations. There are many operational benefits related to the use of this solution:

a. The UAVs bring safety to daily survey operations: there is no need for the humans to access dangerous working areas anymore (mines, quarries, or polluted sites). The missions can be programmed and reproduced reliably as often as needed for regularly updated maps.

b. The UAVs are a cost-effective solution. It is cheaper to operate a UAS rather than an aircraft or other ground systems for the same results. Moreover, small UAS like the eBee and the UX5 can help Ag businesses and farmers face the growing needs of the population while reducing operational costs. These UAVs also enable the ability to take up new challenges - like water or environmental management through analysis of vegetation index maps.

c. Users can save time and work more efficiently by using a UAV. A mission does not need a long preparation time or long deployment constraints, or long waiting time for perfect weather conditions unlike, for example, the use of satellites. Initial results are accessible directly on-site, which is impossible with images provided by satellites or manned aircrafts.

d. Lastly, but possibly most importantly, is the efficiency aspects of these systems in the development, production and maintenance of the infrastructure related to the national energy issues that are being played out in the extraction of tight oil reserves in various parts of the United States. MLSs area of service includes the Bakken Reserve in North Dakota and Montana which is situated in some of the most rural parts of the Country where design/build services desperately needing the services suggested herein are rare or sometimes non-existent. The ability

of UAVs to remotely gather information for use in the proper and efficient planning, design, construction and maintenance of the infrastructure being required by the Bakken will help the social, economic and safety of the current residents along with the huge influx of workers and their families.

3. APPLICABLE LEGAL STANDARD UNDER SECTION 333

a. Airworthiness assessment

SenseFly has demonstrated their respective airworthiness through many and varied national international projects, involving state/federal agencies or universities (among others the New Mexico State University: <https://newscenter.nmsu.edu/Articles/view/10208/nmsu-uas-flighttest-center-conducts-ebec-airworthiness-assessment>, and the US Army Corps of Engineers (“USACE”) New Orleans, who coordinated with the Department of Army and the FAA to obtain all authorizations required in order to operate the eBee UAS). Moreover, SenseFly has obtained flight approvals for the eBee from the national civil aviation authority in many countries, including:

- Switzerland (flight approval for Visual Line of Sight “VLOS” operations)
- Canada (flight approval for VLOS operations)
- Australia (flight approval for VLOS operations)
- France (flight approval for Extended-VLOS operations)
- Germany (flight approval for VLOS operations)
- United Kingdom (flight approval for VLOS operations)
- Norway (flight approval for VLOS operations)
- Sweden (flight approval for VLOS operations)
- Denmark (flight approval for VLOS operations)

Trimble believes that it has shown compliance with the requirements of Order 8130.34C, Airworthiness Certification of Unmanned Aircraft Systems and Optionally Piloted Aircraft, in its pending SAC application for the UX5. The criteria set forth in the Order specify the substantive showings of the device’s safety and fitness for operation to ensure that the FAA has sufficient basis to evaluate the aircraft’s safety.⁶ Trimble submits that completion of the SAC process for the UX5 provides assurance of the public safety for the aircraft type, given the prior review by the FAA under Part 21 for the predecessor model, the X-100, in connection with the issuance of a SAC for the X-100

b. Operating Conditions

Grant of the exemption to MLS will be subject to the following operating conditions, The operator proposed the following conditions and/or limitations, which were accepted by the FAA.²

1. The UA will weigh less than 55 lbs. Operations will be limited to the SenseFly eBee and the Trimble UX5. Proposed operations of any other aircraft will require an amendment to the grant of exemption contemplated herein.
2. Flights will be operated within visual line of sight (VLOS) of a Pilot in Command (PIC) and/or Visual Observer (VO).
3. Maximum total flight time for each operational flight will be 30 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 30 minute limit.
4. Flights will be operated at an altitude of no more than 400 feet AGL.
5. The UAS will only operate within a confined, preprogrammed survey area.
6. A briefing will be conducted in regard to the planned UAS operations prior to each day's flight mission. It will be mandatory that all personnel who will be performing duties within the boundaries of the safety perimeter be present for this briefing.
7. Pilot and observer will have been trained in operation of UAS generally and received up-to-date information on the particular UAS to be operated as required in the respective the Manuals. The operator's manual will be maintained and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations of an exemption and the procedures outlined in the operator's manual, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operator's manual. The operator may update or revise its operator's manual. 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. If the operator determines that any update or revision would affect the basis for which the FAA granted this exemption, then the operator must petition for amendment to their exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operator's manual.
8. PIC and VO will at all times be able to communicate by voice and/or text.
9. Written and/or oral permission from the relevant property holders will be obtained.

10. All required permissions and permits will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.
11. If the UAS loses communications or loses its GPS signal, the UAS will have capability to return to a pre-determined location within the Survey Area and land.
12. The UAS will have the capability to abort a flight in case of unpredicted obstacles or emergencies.
13. Prior to each flight the PIC must inspect the UAS to ensure it is in a condition for safe flight. 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. The Ground Control Station, if utilized, must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.
14. 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 in accordance with the operator's manual. The PIC who conducts the functional test flight must make an entry in the UAS aircraft records of the flight. The requirements and procedures for a functional test flight and aircraft record entry must be added to the operator's manual.
15. The operator must follow the manufacturer's UAS aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements. When unavailable, aircraft maintenance/component/overhaul, replacement, and inspection/maintenance requirements must be established and identified in the operator's manual. At a minimum, the following must be included in the operator's manual:
 - a. Actuators / Servos
 - b. Transmission (single rotor)
 - c. Powerplant (motors)
 - d. Propellers
 - e. Electronic speed controller
 - f. Batteries
 - g. Mechanical dynamic components (single rotor)
 - h. Remote command and control
 - i. Ground control station (if used)
 - j. Any other components as determined by the operator

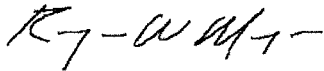
16. If planned operations occur within 5 miles of Commercial Services Airport as defined by the FAA, the operator must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations. This COA will also require the operator to request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.
17. 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.
18. The operator must develop procedures to document and maintain a record of the UAS maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the UAS. The preflight inspection must account for all discrepancies, i.e. inoperable components, items, or equipment, not covered in the relevant preflight inspection sections of the operator's manual.
19. Each UAS operated under this exemption must comply with all manufacturer Safety Bulletins.
20. Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.
21. The UA must remain clear and yield the right of way to all other manned operations and activities at all times (including, but not limited to, ultralight vehicles, parachute activities, parasailing activities, hang gliders, etc.).
22. 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.
23. The UAS cannot be operated by the PIC from any moving device or vehicle.
24. 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.
25. The UA may not operate in Class B, C, or D airspace without written approval from the FAA. The UA may not operate within 5 nautical miles of the geographic center of a non-towered airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

26. Any 1) incident, 2) accident, or 3) flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the Federal Aviation Administration's (FAA) 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. Further flight operations may not be conducted until the incident, accident, or transgression is reviewed by AFS-80 and authorization to resume operations is provided.

With this petition intended that MLS will be able to provide safe, reliable and accurate land surveying services and information to its clients with the use of the latest innovative technology associated with remotely piloted aircraft.

Your attention to this matter is appreciated.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. W. Meyer".

Roger W. Meyer PLS

ANNEX A

EXEMPTION REQUEST AND EQUIVALENT LEVEL OF SAFETY SHOWINGS UNDER APPLICABLE RULES SUBJECT TO EXEMPTION

MLS requests an exemption from the following regulations as well as any additional regulations that may technically apply to the operation of the SenseFly eBee and the Trimble UX5 ("UAVs):

14 C.F.R. Part 21, Subpart H: Airworthiness Certificates 14 CFR § 91.203

Section 91.203 requires all civil aircraft to have a certificate of airworthiness. Part 21, Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR § 91.203(a). Given the size of the Uavs, their very light weight and the limited operating area associated with its utilization, it is unnecessary to go through the certificate of airworthiness process under Part 21 Subpart H in order to achieve or exceed current safety levels.

Such an exemption meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the UAS involved. An analysis of these different criteria demonstrates that the UAVs operated without an airworthiness certificate, under the conditions proposed in that exemption, will be at least as safe, or safer, than a conventional aircraft with an airworthiness certificate.

14 C.F.R. § 45.23 & 14 C.F.R. § 45.29: Display of marks; size of marks

These regulations provide that each aircraft must display "N" and the aircraft's registration number in letters at least 3 inches high. Additionally, the aircraft must display the word "EXPERIMENTAL" in letters at least 2 inches high near the entrance to the cabin, cockpit, or pilot station. Given the size of the UAVs, this requirement is impossible to match.

14. CFR §61.23: Medical certificates: Requirement and duration

Regulations provide that a person:

(1) Must hold a first-class medical certificate:

- When exercising the pilot-in-command privileges of an airline transport pilot certificate;
- When exercising the second-in-command privileges of an airline transport pilot certificate in a flag or supplemental operation in part 121 of this chapter that requires three or more pilots; or
- When serving as a required pilot flight crewmember in an operation conducted under part 121 of this chapter if the pilot has reached his or her 60th birthday.

(2) Must hold at least a second class medical certificate when exercising:

- Second-in-command privileges of an airline transport pilot certificate in part 121 of this chapter (other than operations specified in paragraph (a)(1)(ii) of this section); or
- Privileges of a commercial pilot certificate

Given the size of the UAVs, their structure, the limited flight area, and the safety features integrated in the autopilot (among others a flight termination system), MLS believes that an Equivalent Level of Safety can be reached if the operator has a valid driver's license.

14 C.F.R. § 61.3: Requirements for certificates, ratings and authorizations

14 C.F.R. § 61.113(a) & (b); 61.133(a): Private Pilot Privileges and Limitations; Pilot in Command; Commercial Pilot Privileges and Limitations

The regulation provides that no person may serve as a required pilot flight crewmember of a civil aircraft of the United States, unless that person:

(1) Has a pilot certificate or special purpose pilot authorization issued under this part in that person's physical possession or readily accessible in the aircraft when exercising the privileges of that pilot certificate or authorization. However, when the aircraft is operated within a foreign country, a pilot license issued by that country may be used. The regulation provides also that no person that holds a private pilot certificate may act as pilot in command of an aircraft for compensation or hire. Subparagraph (b) 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;

(2) The aircraft does not carry passengers or property for compensation or hire.

Given the safety features of the UAVs and the fact that the missions are pre-programmed and monitored in real-time with a specific flight management software, MLS proposes that operators of the UAVs should not be required to hold a commercial or private pilot certification. Instead, operators should be required to:

- Have completed the UAV manufacturers training program for operation of the UAS. The manufacturer's training program for eBee operators has been already satisfactorily reviewed through the Application for Airworthiness Qualification Level (AQL) 3 Airworthiness Release (AWR). The equivalent level of safety will be achieved by having an operator trained UAVs manufacturer, and using the integrated features of the aircraft to maintain a high level of safety during the different missions.

14 C.F.R. § 91.7(a): Civil aircraft airworthiness

Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR §91.203 (a) (1). Given the size and limited operating area associated with the aircraft to be utilized by the Applicant, an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C. §44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UAS. In all cases, an analysis of these criteria demonstrates that the UAS operated without an airworthiness certificate, in the restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

14 C.F.R. § 91.9: Civil aircraft flight manual, marking, and placard requirements

The equivalent level of safety will be achieved by keeping a hard copy of the user manual in close proximity to the operator.

The equivalent level of safety will be provided by having the sUAV marked on its fuselage as required by §45.29 (f) where the pilot, observer and others working with the sUAV will see the identification of the UAS as "Experimental." The FAA has issued the following exemptions to this regulation to Exemptions Nos. 10700, 8738, 10167 and 10167A.

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

The 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 equivalent level of safety during the in-flight training will be achieved by the manufacturer or affiliate providing the training as described in the manufacturer's training program and through the use of experienced and qualified instructors familiar with the UAVs

14 CFR § 91.119: Minimum Safe Altitudes

Section 91.119 establishes safe altitudes for operation of civil aircraft. The exemption requests authority to operate at altitudes up to 400 AGL. It will however be operated in a restricted area with security perimeter, where buildings and people will not be exposed to operations without their pre-obtained consent

The equivalent level of safety will be achieved given the size, weight, speed of the UAS as well as the location where it is operated. No flight will be taken without the permission of the property owner or local officials.

Compared to flight operations with aircraft weighing far more than those proposed herein and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented with conventional aircraft.

14 CFR 91.121: Altimeter settings

This regulation requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "...to the elevation of the departure airport or an appropriate altimeter setting available before departure." As the UAV may not have a barometric altimeter, but instead a GPS altitude read out, an exemption is requested.

An equivalent level of safety will be achieved by the operator confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

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

The 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. As the UAVs are electric-powered, this requirement is inapplicable. In any event, given the contemplated operations, MLS believes that an equivalent level of safety is already achieved with the specific procedure preventing the UAVs accepting a take-off

order is the battery level is below a given value. Moreover, the manufacturers have integrated low and critical battery level warnings and implemented a "return to home" action in these situations.

14 C.F.R. § 91.203 (a) & (b): Carrying Civil Aircraft Certification and Registration

This regulation provides as follows:

- No person may operate a civil aircraft unless it has an appropriate and current airworthiness certificate.
- No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

An equivalent level of safety will be achieved by keeping these documents at the ground control point where the pilot flying the UAV will have immediate access to them, to the extent they are applicable to such UAV. The FAA has issued numerous exemptions to this regulation. A representative sample of other exceptions includes Exemption Nos. 9565, 9665, 9789, 9789A, 9797, 9797A, 9816A, and 10700.

14 CFR Subpart E (91.401 - 91.417): Maintenance, Preventive Maintenance, and Alterations

The regulation provides that the operator is primarily responsible for maintaining the aircraft in an airworthy condition, including compliance with Parts 39 and 43. Paragraphs 91.407 and 91.409 require the aircraft to be "approved for return to service by a person authorized under 43.7" after maintenance and inspection. Section 91.409 requires an annual inspection for the issuance of an airworthiness certificate. Section 91.417 requires the owner or operator to keep records showing certain maintenance work that has been accomplished by certificated mechanics, under Part 43, or licensed pilots and records of approval of the aircraft for return to service.

MLS proposes that the maintenance of the UAVs will be accomplished by the owner or the operator according to the manufacturers user manual.

Given that these section and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to the applicant. Maintenance will be accomplished by the operator pursuant to the flight manual and operating handbook as referenced herein. An equivalent level of safety will be achieved because these small UAVs are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the UAV can land immediately and will be operating from no higher than 400 feet AGL. The operator will ensure that the UAS is in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety.