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

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

August 26, 2015

Exemption No. 12611
Regulatory Docket No. FAA–2015–1980

Mr. John Moder
Vice President
MotoMon Corporation
14707 South Dixie Highway, Suite 301
Miami, FL 33176

Dear Mr. Moder:

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

By letter dated May 20, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of MotoMon Corporation (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography.

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 Hubsan H109S.

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

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. 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, MotoMon Corporation is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, MotoMon Corporation 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 Hubsan H109S when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed.

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

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be

operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification

(N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

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

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.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 August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

UNITED STATES OF AMERICA

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

WASHINGTON, DC

IN THE MATTER OF THE PETITION FOR EXEMPTION OF:

MotoMon Corporation

FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF

TITLE 14 OF THE CODE OF FEDERAL REGULATION

SECTIONS 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), AND 91.417(a) & (b) CONCERNING COMMERCIAL OPERATION OF THE

Hubsan H109S
UNMANNED AIRCRAFT SYSTEM

PURSUANT TO SECTION 333 OF

THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)

TABLE OF CONTENTS

GLOSSARY OF ABBREVIATIONS

AGL Above Ground Level
AOI Area of Interest ATC
Air Traffic Control
ATO Air Traffic Organization
AV Aerial Vehicle
C.F.R. Code of Federal Regulations
COA Certificate of Authorization FAA
Federal Aviation Administration FAR
Federal Aviation Regulation GCS
Ground Control Station
GPS Global Positioning
System LOL Loss of Link
NAS National Airspace System
NOTAM Notice to Airman
PIC Pilot In Command
Section 333 FAA Modernization and Reform Act of 2012 (FMRA) Section 333
SOP Standard Operating Procedures
UA Unmanned Aircraft
UAS Unmanned Aircraft
System VFR Visual Flight Rules
VLOS Visual Line of Site
VMC Visual Meteorological Conditions
VO Visual Observer
VTOL Vertical Takeoff and Landing 4

SUMMARY

MotoMon Corporation seeks exemption from the requirements of 14 C.F.R §§ 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), to operate an Unmanned Aircraft System pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). This exemption will permit MotoMon Corporation to operate an Unmanned Aircraft System (UAS) for the commercial purpose of conducting aerial photographs and video over certain public roadways and public areas of the United States.

INTRODUCTION AND INTERESTS OF THE PETITIONER

The petitioner, MotoMon Corporation is Incorporated in Florida, USA, were the corporation sells and supports GPS equipmnent, surveys vast amounts of property, and photographs large areas. MotoMon Corporation will utilizw the Hubsan H109S for training, video, testing GPS equipment and other uses in the performance of the business operation.
Primarily MotoMon Corporation is a sales, testing, and video operation business.

BACKGROUND

MotoMon Corporation seeks an exemption to operate the HUBSAN Hubsan H109S UAS for compensation within the NAS. The HUBSAN Hubsan H109S is comprised of a vertical takeoff and landing (VTOL) Unmanned Aircraft (UA) and a transportable Ground Control Station (GCS). The HUBSAN Hubsan H109S has a maximum gross weight of approximately 6.6 pounds, while having a diameter of 31 inches, height of 13 inches, and maximum speed of 23 mph. The HUBSAN Hubsan H109S UA is equipped with four propellers, each being driven by an electric motor powered by Lithium Polymer battery. The HUBSAN Hubsan H109S UA that will be operated by MotoMon Corporation will be registered in accordance with 49 U.S.C. 44103, *Registration of Aircraft*, as well as 14 C.F.R Part 47, *Aircraft Registration*, and marked in accordance with 14 C.F.R. Part 45, *Identification and Registration Marking*.

BASIS FOR PETITION

Petitioner, MotoMon Corporation is pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012, Section 333,
Special Rules for Certain Unmanned Aircraft Systems, hereby petitions the Administrator to operate the HUBSAN Hubsan H109S UAS in the National Airspace System (NAS), and for an exemption from the requirements of 14 C.F.R §§ 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).
In consideration of the size, weight, speed, and limited operating area associated with the unmanned aircraft and its operation, MotoMon Corporation operation of the HUBSAN Hubsan H109S UAS meets the conditions of Section 333 and therefore, will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. 6. Accordingly, MotoMon Corporation requests relief from Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), as these sections set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate. MotoMon Corporation submits that the requested relief is proper since an equivalent level of safety will be ensured. MotoMon Corporation will use its authorized technicians to perform maintenance, alterations, or preventive maintenance on the UAS using the methods, techniques, and practices prescribed in the manufacturer's maintenance manual. Furthermore, MotoMon Corporation will document and maintain all maintenance records for the HUBSAN Hubsan H109S UAS. Relief from certain requirements of Section 61.113(a) and (b), entitled *Private pilot privileges and limitations:*

Pilot in command, is requested by MotoMon Corporation to the extent necessary to allow a Pilot in Command (PIC) who has completed the HUBSAN Hubsan H109S UAS training and currency requirements, to conduct the proposed UAS flight operations. MotoMon Corporation submits that the conditions and limitations set forth herein will ensure the safety of the NAS, as well as the safety of persons or property on the ground.

MotoMon Corporation seeks relief from Section 91.7(a), entitled *Civil aircraft airworthiness,* because the HUBSAN Hubsan H109S UAS does not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. As such, MotoMon Corporation submits that it will ensure that the HUBSAN Hubsan H109S UAS is in an airworthy condition, prior to every flight, by determining that the UAS is in compliance with the HUBSAN Flight Manual, and that the aircraft is in a condition for safe flight.

MotoMon Corporation also seeks an exemption from the requirements of Section 91.121, entitled *Altimeter Settings*, as the HUBSAN Hubsan H109S UA will not have a typical barometric altimeter onboard. However, altitude information of the HUBSAN Hubsan H109S UAS will be provided to the PIC via Global Positioning System (GPS) equipment and a radio communications telemetry data link, which downlinks from the UA to the GCS for active monitoring of the flight path. This altitude information, combined with MotoMon Corporation operation of the HUBSAN Hubsan H109S UA within visual line of sight, at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121.

Additionally, MotoMon Corporation seeks an exemption from the requirements of Section 91.151(b), entitled *Fuel requirements for flight in VFR conditions*. MotoMon Corporation submits that safety will not be affected by terminating flights of the battery powered HUBSAN Hubsan H109S UA after 30 minutes of continuous flight, which would allow for five minutes of battery power remaining.

In accordance with 14 C.F.R. § 11.81, MotoMon Corporation provides the following information in support of its petition for exemption:

A. Name and Address Of The Petitioner.

The name and address of the Petitioner is:

MotoMon Corporation
Mr. John Moder, Vice President
14707 S. Dixie Hwy.,
Suite 301
Miami, Florida 33176
USA

Contact; Mr. John Moder
MotoMon Corporation

B. The Specific Sections Of 14 C.F.R. From Which MotoMon Corporation Seeks Exemption.

1. MotoMon Corporation Seeks Exemption From The Requirements Of Section 61.113(a) And (b).

Section 61.113, entitled *Private pilot privileges and limitations: Pilot in command*, subsections (a) and (b) prescribe the following, in relevant part: 8 No person who holds a private pilot certificate may act as a pilot in command (PIC) of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as PIC of an aircraft.

(a) A private pilot may, for compensation or hire, act as PIC of an aircraft in connection with any business or employment if—

(1) The flight is only incidental to that business or employment; and
(2) The aircraft does not carry passengers or property for compensation or hire.

2. MotoMon Corporation Seeks Exemption From The Requirements Of Section 91.7(a).

Section 91.7, entitled *Civil aircraft airworthiness*, subsection (a), states the following:
(a) No person may operate a civil aircraft unless it is in an airworthy condition.

3. MotoMon Corporation, Seeks Exemption From The Requirements Of Section 91.121.

Section 91.121, entitled *Altimeter settings*, subsection (a), states the following, in part:
(a) Each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating--
(1) Below 18,000 feet MSL, to--
(i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
(ii) If there is no station within the area prescribed in paragraph (a)(1)(i) of this section, the current reported altimeter setting of an appropriate available station; or
(iii) In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure;

4. MotoMon Corporation Seeks Exemption From The Requirements Of Section 91.151(b).

Section 91.151, entitled *Fuel requirements for flight in VFR conditions*, subsection (b), states the following:
(b) No person may begin a flight in a rotorcraft 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, to fly after that for at least 20 minutes.

5. MotoMon Corporation Seeks Exemption From The Requirement Of Section 91.405(a).

Section 91.405, entitled *Maintenance required*, subsection (a), states the following:
Each owner or operator of an aircraft—
(a) Shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter[.]

6. MotoMon Corporation Seeks Exemption From The Requirements Of Section 91.407(a)(1).

Section 91.407, entitled *Operation after maintenance, preventive maintenance, rebuilding, or alteration*, subsection (a)(1), states the following:
(a) No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless--
(1) It has been approved for return to service by a person authorized under § 43.7 of this chapter[.]

7. MotoMon Corporation Seeks Exemption From The Requirements Of Sections 91.409(a)(1) And 91.409(a)(2).

Section 91.409, entitled *Inspections*, subsection (a), states the following:
(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had --
(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by § 43.7 of this chapter; or
(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

8. MotoMon Corporation Seeks Exemption From The Requirements Of Sections 91.417(a) And 91.417(b).

Section 91.417, entitled *Maintenance records*, subsections (a) and (b), state the following:

(a) Except for work performed in accordance with §§ 91.411 and 91.413, each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section: 10

(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--

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

C. The Extent Of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks The Relief.

1. Extent of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks Relief From Section 61.113(a) And (b).

Relief from Section 61.113(a) and (b) entitled *Private pilot privileges and limitations: Pilot in command*, is requested to the extent necessary to allow a PIC holding a private pilot certificate and a third-class airman medical certificate, and who has completed the HUBSAN training and currency requirements, to conduct the proposed UAS flight operations for compensation.

This relief is requested since the limitations set forth in Section 61.113(a) and (b) state that a private pilot may, for compensation or hire, act as PIC of an aircraft in connection with any business or employment if - (1) The flight is only incidental to that business or employment; and (2) The aircraft does not carry passengers or property for compensation or hire.

As set forth more fully below, MotoMon Corporation submits that an equivalent level of safety will be maintained because no person who is not an employee of MotoMon Corporation will have operation rights to fly or maintain the HUBSAN Hubsan H109S and fly the UAS in a manner consistent with the operations specifications as described in this exemption, including evasive and emergency maneuvers, as well as maintaining appropriate distances from people, vessels, vehicles and structures.

Further, MotoMon Corporation submits that all flights of the HUBSAN Hubsan H109S conducted by the PIC pursuant to the grant of this Petition - (1) will be incidental to MotoMon Corporation's business; and (2) will not carry passengers or property for compensation or hire. 12

2. Extent of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks Relief From Section 91.7(a).

Relief from Section 91.7(a) entitled *Civil aircraft airworthiness*, is requested to the extent required to allow MotoMon Corporation to determine that the HUBSAN Hubsan H109S UAS is in an airworthy condition prior to every flight by ensuring that the UAS is in compliance with the HUBSAN Flight Manual, and that the aircraft is in a condition for safe flight.

MotoMon Corporation seeks the requested relief because the HUBSAN Hubsan H109S UAS does not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Therefore, MotoMon Corporation will ensure that the HUBSAN UAS is in an airworthy condition based upon its compliance with the operating documents (i.e., the HUBSAN Flight Manual) prior to every flight, and as stated in the conditions and limitations below.

3. Extent of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks Relief From Section 91.121.

Relief from Section 91.121 entitled *Altimeter settings*, may be required to allow flight operations of the DIJ UAS, which utilizes GPS equipment and a radio communications telemetry data link to downlink altitude information to the PIC from the UA to the GCS. As more fully set forth below, safety will be maintained as a result of the DIJ Hubsan H109S UA's altitude readout via GPS equipment, and MotoMon Corporation's operation of the HUBSAN Hubsan H109S UA within visual line of sight, at or below 400 feet AGL.

4. Extent Of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks Relief From Section 91.151(b).

Relief from Section 91.151(b) entitled *Fuel requirements for flight in VFR conditions*, is requested to the extent required to allow flights of the battery powered HUBSAN UA during daylight hours in visual meteorological conditions (VMC), under visual flight rules (VFR) conditions, to continue for a total duration of 30 minutes, which will ensure that the UA will land with five minutes of battery power remaining. MotoMon Corporation seeks the requested relief because without an exemption from Section 91.151(b), the flight time duration of the battery powered HUBSAN UA will severely constrain the practicality of any aerial acquisition and research flight operations that MotoMon Corporation proposes to conduct pursuant to this Petition.

Significantly, as set forth below, the technical specifications of the HUBSAN Hubsan H109S UAS, the HUBSAN Flight Manual, and MotoMon Corporation's proposed operating limitations, ensure that MotoMon Corporation will safely operate the battery powered HUBSAN UA during daylight hours in VFR conditions, for a total flight duration of 30 minutes, landing with five minutes of battery power remaining.

5. Extent Of Relief MotoMon Corporation Seeks And The Reason MotoMon Corporation Seeks Relief From Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), And 91.417(a) & (b).

Since Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) only apply to aircraft with an airworthiness certificate, MotoMon Corporation requests relief from these Sections because the HUBSAN Hubsan H109S UAS does not require an airworthiness certificate. As set forth more fully below, the HUBSAN Hubsan H109S UAS meets the conditions of Section 333 of the FMRA for operation without an airworthiness certificate. Accordingly, MotoMon Corporation will use authorized technicians to perform maintenance, alterations, or preventive maintenance on the UAS using the methods, techniques, and practices prescribed in the manufacturer's maintenance manual. Furthermore, MotoMon Corporation will document and maintain all maintenance records for the HUBSAN Hubsan H109S UAS.

D. The Reasons Why Granting MotoMon Corporation's Request Would Be In The Public Interest; That Is, How It Would Benefit The Public As A Whole.

Granting the present Petition will further the public interest by allowing MotoMon Corporation to safely, efficiently, and economically perform aerial photographs and video over public areas of the United States, commercially, in support of government entities, GPS testing and documentation, scientific studies, and video mapping. Additionally, use of the HUBSAN Hubsan H109S UAS will decrease congestion of the NAS, reduce pollution, and provide significant benefits to the economy. Notably, the benefits of MotoMon Corporation's proposed operation of the HUBSAN H109S UAS will be realized without implicating any privacy issues.

1. The Public Will Benefit From The Aerial Acquisitioned Photographs and Video Performed.

MotoMon Corporation submits this Petition to commercially operate the HUBSAN Hubsan H109S UAS and perform aerial acquisitions and research throughout areas of the United States, in support of government entities, private investigations, court appointed investigations, evidentiary video and photographs of crime scenes, and crime scene direction mapping. The HUBSAN Hubsan H109S UAS will provide safe, efficient, and economical aerial acquisition and research operations to further each of these fields, all of which are critical to the well-being of the general public.

The specific operations that MotoMon Corporation will perform with the HUBSAN Hubsan H109S UAS demonstrate how the requested exemption will directly benefit the above-referenced industries and the public. In court appointed investigations, the aerial acquisition performed by the HUBSAN Hubsan H109S will create critical aerial evidence of a wider area than could be done on the ground. In private investigations the HUBSAN Hubsan H109S UAS will be used to aid in property inspections, and crime scene evidence. The HUBSAN Hubsan H109S UAS will also further the investigative process since large and vast amounts of photographs can be condensed into one video segment for court preparation and court viewing.

2. The Public Will Benefit From Decreased Congestion Of The NAS.

The HUBSAN Hubsan H109S UA is battery powered and serves as a safe, efficient, and economical alternative to the manned aircraft traditionally utilized to obtain aerial imagery. By reducing the amount of manned aircraft needed to perform aerial acquisitions, an exemption allowing the use

Of a HUBSAN Hubsan H109S UAS would reduce the amount of manned aircraft in the NAS, reduce noise and air pollution, as well as increase the safety of life and property in the air and on the ground. Furthermore, by reducing the number of manned aircraft operating in the NAS, congestion around airports caused by arriving and departing aircraft will be reduced. The HUBSAN Hubsan H109S UA does not require an airport to takeoff or land. Likewise, a reduction of manned aircraft conducting aerial survey missions would result in fewer aircraft that must be handled by air traffic control during the ground, takeoff, departure, arrival, and landing phases of flight operations.

3. The Public Will Benefit From The Safety And Efficiency Of The HUBSAN Hubsan H109S UAS.

Conducting aerial acquisitions with the HUBSAN Hubsan H109S UAS, instead of manned aircraft, will greatly benefit the public by drastically reducing the levels of air and noise pollution generated during traditional aerial survey flight operations. By using battery power and electric motors, the HUBSAN Hubsan H109S UAS produces no air pollution, and is the most viable environmentally conscious alternative to the cabin class, six cylinder internal combustion twin engine aircraft that are typically utilized for aerial acquisitions, while burning approximately 20-30 gallons per hour of leaded aviation fuel. The HUBSAN Hubsan H109S UA, while reducing the carbon footprint of aerial acquisitions, also eliminates noise pollution, as the UA is propelled by battery powered electric motors, rather than an internal combustion engine.

By using the HUBSAN Hubsan H109S UAS to perform aerial acquisitions, the substantial risk to life

and property in the air and on the ground, which is usually associated with traditional manned aircraft flight operations, will be substantially reduced or completely eliminated. Aside from the lack of flight crew members located onboard the aircraft, the HUBSAN Hubsan H109S UA (weighing approximately 6.6 pounds at its maximum gross weight with a diameter of 31 inches, and with no fuel on board), has less physical potential for collateral damage to life and property on the ground, and in the air, compared to the manned aircraft that typically conduct aerial acquisitions (weighing approximately 6,500 pounds with a wingspan of approximately 40 feet, a length of 34 feet, and a fuel capacity of 180 gallons).

4. Performing Aerial Acquisition Operations With The HUBSAN Hubsan H109S UAS Will Benefit The Economy.

In addition to being safe and efficient, the HUBSAN Hubsan H109S UAS is also an economical alternative to using manned aircraft to conduct aerial acquisitions. As such, operation of the HUBSAN Hubsan H109S UAS will allow United States based companies, like MotoMon Corporation, to remain competitive and contribute to growth of the U.S. economy. Specifically, with the rising cost of aviation fuel and the Environmental Protection Agency ("EPA") regulatory actions phasing out leaded aviation fuels, U.S. owned and operated companies must adopt new and alternative technology in order to remain competitive. Operating the battery powered HUBSAN Hubsan H109S UAS is one such technology that not only allows companies greater operational flexibility compared to manned aircraft, but provides such flexibility without the high operational cost of a traditional manned aircraft.

By operating the HUBSAN Hubsan H109S UAS, companies such as MotoMon Corporation can remain competitive and profitable, and therefore, provide greater job stability to employees and contractors, which will ultimately contribute to growth of the U.S. economy. Improved financial performance of U.S. companies, through commercial use of the HUBSAN Hubsan H109S UAS, provides a stable workforce that increases consumer spending; improves local, state, and federal tax revenues; and allows companies to invest in research and development in order to remain competitive both in the United States and abroad.

5. There Are No Privacy Issues.

Similar to the manned aerial acquisition flight operations that have been conducted for decades, MotoMon Corporation's proposed operation of the HUBSAN Hubsan H109S UAS will not implicate any privacy issues. Specifically, the HUBSAN Hubsan H109S UAS will be operated only in rural areas, and in accordance with all Federal Aviation Regulations, including the minimum altitude requirements of 14 C.F.R. § 91.119. Most significantly, the HUBSAN Hubsan H109S UA will not be operated closer than 500 feet to any person, vessel, vehicle, or structure, which is not directly involved in the operation.

E. The Reasons Why Granting The Exemption Would Not Adversely Affect Safety, Or How The Exemption Would Provide A Level Of Safety At Least Equal To That Provided By The Rule From Which MotoMon Corporation Seeks Exemption.

1. Reasons Why The HUBSAN Hubsan H109S UAS Meets The Conditions Of The FAA Modernization and Reform Act of 2012 (FMRA) Section 333.

In consideration of the size, weight, speed, and limited operating area associated with the unmanned aircraft and its operation, MotoMon Corporation's operation of the HUBSAN Hubsan H109S UAS meets the conditions of FMRA Section 333, and will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

Section 333 provides authority for a UAS to operate without airworthiness certification and sets forth requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security. Specifically, FMRA Section 333 states the following, in part:

(a) In General.--Notwithstanding any other requirement of this subtitle, and not later than 180 days after the date of enactment of this Act, the Secretary of Transportation shall determine if certain unmanned aircraft systems may operate safely in the national airspace system before completion of the plan and rulemaking required by section 332 of this Act or the guidance required by section 334 of this Act.
(b) Assessment of Unmanned Aircraft Systems.--In making the determination under subsection (a), the Secretary shall determine, at a minimum-- 18
(1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; and (2) whether a certificate of waiver, certificate of authorization, or airworthiness certification under section 44704 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).
(c) Requirements for Safe Operation.--If the Secretary determines under this section that certain unmanned aircraft systems may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft systems in the national airspace system.
In seeking this exemption, MotoMon Corporation submits that the HUBSAN Hubsan H109S UAS can operate safely in the NAS pursuant to FMRA Section 333, as demonstrated by: (a) the characteristics of the HUBSAN Hubsan H109S UAS; (b) the pilot certification requirement; and (c) the specific operating limitations.

a. The Specifications Of The HUBSAN Hubsan H109S UAS Demonstrate Its Safe Characteristics.

The HUBSAN Hubsan H109S UAS does not create a hazard to users of the NAS or the public, or otherwise pose a threat to national security considering its size, weight, speed, and operational capability.

i. Technical Specifications Of The HUBSAN Hubsan H109S UAS.

The technical specifications of the HUBSAN Hubsan H109S UAS are set forth in Appendix C of the "Flight Manual For The HUBSAN Hubsan H109S Unmanned Aircraft System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b)[1].

1 Exhibits to this Petition contain proprietary information, and in accordance with 14 C.F.R. § 11.35(b), are not to be included in the Federal Docket Management System (FDMS).

ii. The HUBSAN Hubsan H109S UAS Autonomous Flight And Navigation Modes Enable The UAS To Remain Within A Defined Operational Area.

A complete description of the autonomous modes and methods of navigation of the HUBSAN Hubsan H109S UAS is provided at pages 2, 4, 5, and 10 of the "Flight Manual For The HUBSAN Hubsan H109S Unmanned Aircraft System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b).

iii. The HUBSAN Hubsan H109S UAS Is Designed For Automatic Return To Launch In The Event Of Loss Of The Control Link Or Navigation.

A complete description of the HUBSAN Hubsan H109S UAS's automatic return to launch function in the event of a break in communication or loss of telemetry data is set forth on pages 2, 9, and 10 of the "Flight Manual For The HUBSAN Hubsan H109S Unmanned Aircraft System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b). **b. Flight Operations Of The HUBSAN Hubsan H109S UAS Are Limited To The Line Of Sight Of A Certificated Pilot in Command With A Safety Observer.**

MotoMon Corporation will only utilize certificated pilots who possess a valid airman medical

certificate to act as a pilot in command (PIC) of the HUBSAN Hubsan H109S UAS. Additionally, a safety observer will assist all pilots. The PIC must complete the HUBSAN Hubsan H109S UAS training and qualification, as set forth in the "Flight Manual For The HUBSAN Hubsan H109S Unmanned Aircraft System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b). 20

c. Flights Of The HUBSAN Hubsan H109S UAS Will Be Conducted Pursuant To Specific Operating Limitations.

In seeking this exemption, MotoMon Corporation proposes to commercially operate the HUBSAN Hubsan H109S UAS for the special purpose of conducting aerial acquisitions over public areas of United States, pursuant to the following specific operating limitations:

1) Operations authorized by this grant of exemption are limited to the following aircraft described in the operator's manual which is a quad rotor aircraft weighing less than 10 pounds: HUBSAN Hubsan H109S Unmanned Aircraft System. Proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2) The UA may not be flown at an indicated airspeed exceeding 25 MPH & the UA must be operated at an altitude of no more than 400 feet above ground level (AGL), as indicated by the procedures specified in the operator's manual. All altitudes reported to ATC must be in feet AGL.

3) 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.

4) All operations must utilize a visual 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.

5) The operator's manual 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 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 upon 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.

6) 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 must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

7) 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.

8) 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.

9) The operator must follow the manufacturer's UAS aircraft/component, maintenance,

overhaul, replacement, inspection, and life limit requirements, with particular attention to flight critical components that may not be addressed in the manufacturer's manuals.
10) MotoMon Corporation must carry out their maintenance, inspections, and record keeping requirements in accordance with the operator's manual. 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 UAS technician or PIC returning the UAS to service.
11) MotoMon Corporation UAS technicians must receive and document training referenced in the operator's manual.
12) Each UAS operated under this exemption must comply with all manufacturer System and Safety Bulletins.
13) MotoMon Corporation maintenance personnel must make a record entry in the UAS logbook or equivalent document of the corrective action taken against discrepancies discovered between inspections.
15) The PIC must possess at least a private pilot certificate and a third-class airman medical certificate. The PIC must also meet the flight review requirements specified in 14 C.F.R. § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.
16) The operator may not permit any PIC to operate unless that PIC has demonstrated, through the training and currency requirements set forth in the operator's manual, that the PIC is able 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 people, vessels, vehicles and structures. 22
17) UAS operations may not be conducted during night, as defined in 14 C.F.R. § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.
18) The UA may not operate within 5 nautical miles of the airport reference point as denoted on a current FAA-published aeronautical chart. The UA may not operate within 3 nautical miles from any city or densely populated area.
19) 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.
20) 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 and land, or be recovered in accordance with the operator's manual.
21) The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operator's manual.
22) The PIC is prohibited from beginning a UAS flight unless (considering wind and forecast weather conditions and assuming normal cruising speed) there is enough power to fly to the first point of intended landing prior to utilizing battery reserve power.
23) 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 issuance of a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.
24) All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 C.F.R. Part 47, and have identification (N-Number) markings in accordance with 14 C.F.R. Part 45, Subpart C. Markings must be as large as practicable.
25) 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.

26) The documents required under 14 C.F.R. 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.
27) The UA must remain clear and yield the right of way to all other manned aviation operations and activities at all times.
28) The UAS may not be operated by the PIC from any moving device or vehicle. 23
29) The 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.
30) Flight operations must be conducted at least 500 feet from all nonparticipating persons (persons other than the PIC or VO), vessels, vehicles, and structures unless:
a. Barriers or structures are present that sufficiently protect nonparticipating persons from 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 and/or;
b. the aircraft is operated near vessels, vehicles or structures where the land owner/controller has granted permission and the PIC has made a safety assessment of the risk of operating closer to those objects and;
c. operations near the PIC or VO do not present an undue hazard to the PIC or VO, per § 91.119(a). 31) All operations shall be conducted over private or controlled-access property with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained prior to the beginning of every flight.
32) 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.

2. Reasons Why An Exemption From The Requirements Of Section 61.113(a) And (b) Would Not Adversely Affect Safety.

MotoMon Corporation submits that the equivalent level of safety established by Section 61.113(a) and (b) will be maintained because no PIC will be allowed to operate the HUBSAN Hubsan H109S UAS unless that PIC has demonstrated, through the HUBSAN Hubsan H109S UAS training and currency requirements, that the PIC is able to safely operate the HUBSAN Hubsan H109S UAS in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures. 24
Considering MotoMon Corporation's proposed area of operations, and the operating limitations set forth-above; the parallel nature of private pilot aeronautical knowledge requirements to those of commercial pilot requirements (*See* Exemption No. 11062); and the airmanship skills necessary to safely operate the HUBSAN Hubsan H109S UAS, MotoMon Corporation submits that the additional manned airmanship experience of a commercially certificated pilot would not correlate to the airmanship skills necessary for MotoMon Corporation's specific proposed flight operations.
The HUBSAN Hubsan H109S UAS was the subject of a previous Grant of Exemption from Section 61.113(a) and (b). In Exemption No. 11109, the FAA granted relief from Section 61.113(a) and (b) concerning the operation of the HUBSAN Hubsan H109S UAS by a PIC holding a private pilot certificate and third class airman medical certificate, based upon the following analysis:
The FAA has analyzed Clayco's proposed operation and has determined that it does not differ

significantly from the situation described in Grant of Exemption No. 11062 (Astraeus Aerial). Clayco plans to operate over private property with controlled access in the NAS. Given: 1) the similar nature of Clayco's proposed operating environment to that of Astraeus', 2) the parallel nature of private pilot aeronautical knowledge requirements to those of commercial requirements [ref: Exemption No. 11062], and 3) the airmanship skills necessary to operate the UAS, the FAA finds that the additional manned airmanship experience of a commercially certificated pilot would not correlate to the airmanship skills necessary for Clayco's specific proposed operations. Therefore, the FAA finds that a PIC holding a private pilot certificate and a third-class airman medical certificate is appropriate for the proposed operations.

With regard to the airmanship skills necessary to operate the UAS (item #3 stated above), Clayco has proposed a 100 hour training program and 6 month currency requirements. The conditions and limitations below stipulate that Clayco may not permit any PIC to operate unless that PIC has demonstrated through Clayco's training and currency requirements that the PIC is able 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 people, vessels, vehicles and structures.

See Exemption No. 11109 at 12.

Additionally, the FAA has previously granted relief from Section 61.113(a) and (b) specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. 25 Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, 11138).

As in Exemption No. 11109, MotoMon Corporation will not allow any PIC to operate the HUBSAN Hubsan H109S UAS unless that PIC has demonstrated through the HUBSAN Hubsan H109S UAS training and currency requirements, that the PIC is able to safely operate the HUBSAN Hubsan H109S UAS in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

A complete description of the HUBSAN Hubsan H109S UAS Training and Qualification requirements is set forth at page 5 of the "Flight Manual For The HUBSAN Hubsan H109S h Unmanned Aircraft System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b).

3. Reasons Why An Exemption From The Requirements Of Section 91.7(a) Would Not Adversely Affect Safety.

The equivalent level of safety established by Section 91.7(a) will be maintained because prior to every flight, MotoMon Corporation will ensure that the HUBSAN Hubsan H109S UAS is in an airworthy condition based upon the HUBSAN Hubsan H109S UAS's compliance with its operating documents (i.e., the HUBSAN Hubsan H109S Flight Manual), and as stated in the conditions and limitations herein.

The HUBSAN Hubsan H109S UAS was the subject of a previous Grant of Exemption from Section 91.7(a) (Exemption No. 11109). Additionally, the FAA has previously granted relief from Section 91.7(a) specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, 11138). 26

4. Reasons Why An Exemption From The Requirements Of Section 91.121 Would Not Adversely Affect Safety.

The equivalent level of safety established by Section 91.121 will be maintained because the altitude information of the HUBSAN Hubsan H109S UA will be provided to the PIC via GPS equipment and a radio communications telemetry data link, which downlinks from the UA to the GCS for active

monitoring of the flight path. This altitude information, combined with MotoMon Corporation's operation of the HUBSAN Hubsan H109S UA within visual line of sight, at or below 400 feet AGL, will ensure a level of safety equivalent to Section 91.121. The altitude information will be generated by GPS equipment installed onboard the aircraft. Prior to each flight, a zero altitude initiation point will be established and confirmed for accuracy by the UAS PIC. The HUBSAN Hubsan H109S UAS was the subject of a previous Grant of Exemption from Section 91.121 (Exemption No. 11109). Additionally, the FAA has previously granted relief from Section 91.121 specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11112, 11136, 11138).

5. Reasons Why An Exemption From The Requirements Of Section 91.151(b) Would Not Adversely Affect Safety.

A grant of this exemption would ensure an equivalent level of safety established by 14 C.F.R. Section 91.151(b) as a result of (1) the technical specifications of the HUBSAN Hubsan H109S UAS; (2) the limitations on the proposed flight operations; and (3) the location of the proposed flight operations. Accordingly, MotoMon Corporation will ensure that it can safely operate the battery powered HUBSAN Hubsan H109S UA during daylight hours, in VFR conditions, for a total flight duration of no more than 30 minutes, resulting in a landing with five minutes of battery power remaining. In a previous Petition for Exemption, in which an operator was utilizing a HUBSAN Hubsan H109S UAS identical in all material respects to the HUBSAN Hubsan H109S UAS MotoMon Corporation proposes to use, the FAA granted an exemption from the requirements of Section 91.151, stating as follows:

In the event that the UAS should run out of power, it would simply land within the access controlled operating area. Given its weight and construction material, the risks are less than contemplated by the current regulation. Prior relief has been granted for manned aircraft to operate at less than the minimums prescribed in § 91.151 (a), including Exemption Nos. 2689, 5745, and 10650. In addition, similar UAS-specific relief has been granted an Exemption Nos. 8811, 10808, and 10673 for daytime, Visual Flight Rules (VFR) conditions. The HUBSAN Hubsan H109S provides a battery failsafe that commands the UA's return to the launch point when critical minimum voltage is reached. The UAS batteries provide approximately 35 minutes of powered flight. The FAA agrees with Clayco's proposal to limit UAS flights to not more than 30 minutes, or enough battery reserve to ensure that the UAS lands at the ground station with at least 20% battery reserve power, whichever happens first. Given the limitations on its proposed operations and the location of those proposed operations, a reduced minimum power reserve for flight in daylight VFR conditions is reasonable.

See Exemption No. 11109 at 15.

Here, as in Exemption No. 11109, the technical specifications of the HUBSAN Hubsan H109S UAS; the limitations on the proposed flight operations; and the location of the proposed operations, will ensure that MotoMon Corporation may safely operate the battery powered HUBSAN Hubsan H109S UA during daylight hours in VFR conditions for a total duration of not more than 30 minutes, and landing with five minutes of battery power remaining.

Significantly, previous exemptions granted by the FAA concerning Section 91.151 establish that safety is not adversely affected when the technical characteristics and operating limitations of the UAS are considered. Relief has been granted for manned aircraft to operate at less than the minimums prescribed in Section 91.151, including Exemption Nos. 2689, 5745, and 10650. Moreover, the FAA has previously granted relief from Section 91.151 specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 288811, 10808, 10673, 11042, 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11136, 11138).

6. Reasons Why An Exemption From The Requirements Of Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), And 91.417(a) & (b) Would Not Adversely Affect Safety.

In seeking this exemption, MotoMon Corporation submits that the equivalent level of safety with regard to the regulatory maintenance and alteration requirements established by Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) will be met because MotoMon Corporation will use its trained technicians to perform maintenance, alterations, or preventive maintenance on the unmanned aircraft system using the methods, techniques, and practices prescribed in the manufacturer's maintenance manual. Furthermore, MotoMon Corporation will document and maintain all maintenance records for the HUBSAN Hubsan H109S UAS.

Since the HUBSAN Hubsan H109S UAS will be inspected as prescribed by the manufacturer's maintenance manual, MotoMon Corporation will maintain the equivalent level of safety established by Sections 91.405(a), 91.409(a)(1), and 91.409(a)(2). The Flight Manual For The HUBSAN Hubsan H109S UAS sets forth airworthiness requirements for the UA, including preflight and post flight inspections, as well as scheduled maintenance in four categories: daily, weekly, monthly, and yearly.

Likewise, the exemption sought will not adversely affect safety because MotoMon Corporation will perform maintenance, alterations or preventive maintenance on the UAS using the methods, techniques, and practices prescribed by the manufacturer's maintenance manual. The Flight Manual For The HUBSAN Hubsan H109S UAS details procedures for each component of the UA, including the components of the propulsion system, avionics system, and payload system.

A complete description of the HUBSAN Hubsan H109S UAS airworthiness and maintenance requirements is set forth at page 6 of the "Flight Manual For The HUBSAN Hubsan H109S Unmanned Aircraft 29 System (UAS)," attached hereto as Exhibit A. Exhibit A contains proprietary information and is to be held in a separate file pursuant to 14 C.F.R. § 11.35(b).

Furthermore, the exemption sought would maintain an equivalent level of safety established by Sections 91.407, 91.417(a) and 91.417(b), because all maintenance of the HUBSAN Hubsan H109S UAS will be performed by MotoMon Corporation trained technicians, who will document and maintain maintenance records for the HUBSAN Hubsan H109S UAS.

Significantly, previous exemptions granted by the FAA concerning the HUBSAN Hubsan H109S UAS and Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) establish that safety is not adversely affected when the technical characteristics and operating limitations of the UAS are considered. In Exemption No. 11109, the FAA stated the following concerning the HUBSAN Hubsan H109S UAS and the HUBSAN Hubsan H109S Flight Manual:

Regarding the petitioner's requested relief from 14 C.F.R 91.405 (a) *Maintenance required*, 91.407(a)(1) O*peration after maintenance, preventive maintenance, rebuilding, or alteration*, 91.409(a)(2) *Inspections*, and 91.417(a) and (b) *Maintenance records*, the FAA has determined that relief from § 91.409(a)(1) is also necessary because it is an alternate inspection requirement of § 91.409(a)(2). The FAA has carefully evaluated the petitioner's request and determined that cause for granting the exemption is warranted. The FAA notes that the petitioner's HUBSAN Hubsan H109S UAS Flight Manual contain daily, preflight, monthly and yearly checks for the UAS. The FAA finds that adherence to the HUBSAN Hubsan H109S Flight Manual, as required by the conditions and limitations below, is sufficient to ensure that safety is not adversely affected. In accordance with the petitioner's UAS maintenance, inspection, and recordkeeping requirements, the FAA finds that exemption from 14 C.F.R. 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b) is warranted subject to the conditions and limitations below.

In consideration of MotoMon Corporation's proposed operating limitations, the most recent HUBSAN Hubsan H109S Flight Manual, and the technical aspects of the HUBSAN Hubsan H109S UAS, MotoMon Corporation submits that safety will not be adversely affected by granting exemption from 14 C.F.R. Sections 91.405(a), 91.407(a)(1) and (a)(2), 91.409(a)(2), and 91.417(a)

and (b). The FAA has previously granted relief specific to UAS in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, 11138).

7. The FAA May Prescribe Any Other Conditions For Safe Operation.

In accordance with Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) and 14 C.F.R. § 21.16 entitled *Special Conditions*, MotoMon Corporation requests that the FAA prescribe special conditions for the intended operation of the HUBSAN Hubsan H109S UAS, which contain such safety standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R §§ 61.113(a) & (b), 91.7 (a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b). Such special conditions will permit safe operation of the UAS for the limited purpose of conducting aerial acquisitions over certain rural areas of the United States. FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification in accordance with any requirements that must be established for the safe operation of the UAS in the NAS.

Likewise, the Administrator may prescribe special conditions pursuant to 14 C.F.R. § 21.16, for operation of the HUBSAN Hubsan H109S UAS, since the airworthiness regulations of 14 C.F.R. Part 21 do not contain adequate or appropriate safety standards, due to the novel or unusual design features of the aircraft. Section 21.16, entitled *Special Conditions*, states the following:

If the FAA finds that the airworthiness regulations of this subchapter do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature of the aircraft, aircraft engine or propeller, he prescribes special conditions and amendments thereto for the product. The special conditions are issued in accordance with Part 11 of this chapter and contain such safety standards for the aircraft, aircraft engine or propeller as the FAA finds necessary to establish a level of safety equivalent to that established in the regulations.

See 14 C.F.R. § 21.16. 31

Therefore, in accordance with FMRA Section 333 and 14 C.F.R. § 21.16, the FAA may prescribe special conditions for MotoMon Corporation's intended operation of the HUBSAN Hubsan H109S UAS, which contain such safety standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R Sections 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).

F. A Summary That Can Be Published In The *Federal Register,* stating:

The Rules From Which MotoMon Corporation Seeks Exemption:

MotoMon Corporation seeks exemption from the requirements of 14 C.F.R Sections 61.113(a)&(b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).

A Brief Description Of The Nature Of The Exemption MotoMon Corporation Seeks:

This exemption will permit MotoMon Corporation to commercially operate an Unmanned Aircraft System (UAS) for the purpose of conducting aerial acquisitions and research over certain public areas of the United States.

G. Any Additional Information, Views, Or Arguments Available To Support MotoMon Corporation's Request.

This Petition is made pursuant to the FAA Modernization and Reform Act of 2012 (FMRA) Section 333, which directs the Secretary of Transportation to determine if certain UAS may operate safely in the NAS. As such, MotoMon Corporation's request for exemption may be granted pursuant to the authority of FMRA Section 333 and 14 C.F.R. Part 11, as set forth above.

FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification. As discussed in detail above, MotoMon Corporation will operate the HUBSAN Hubsan H109S UAS safely in the NAS, without creating a hazard to users of the NAS, or the public, or otherwise pose a threat to national security.

CONCLUSION

As set forth herein, MotoMon Corporation seeks an exemption pursuant to 14 C.F.R. § 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of the HUBSAN Hubsan H109S UAS commercially, without an airworthiness certificate, for the limited purpose of conducting aerial acquisitions over certain public areas of the United States. By granting this Petition, the FAA Administrator will be fulfilling the Congressional mandate of the FAA Modernization and Reform Act of 2012, while also advancing the interests of the public, by allowing MotoMon Corporation to safely, efficiently, and economically operate the HUBSAN Hubsan H109S UAS commercially within the NAS.

WHEREFORE, in accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, MotoMon Corporation respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), and permit MotoMon Corporation to operate the HUBSAN Hubsan H109S UAS commercially for the purpose of conducting aerial acquisitions, investigations, crime scene video rendering and research over certain public areas of the United States.

Dated: May 20th, 2015
Submitted on behalf of MotoMon Corporation

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