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

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

September 1, 2015

Exemption No. 12703
Regulatory Docket No. FAA−2015−1239

Mr. Corey Ingalls
Technical Specialist
NMotion UAS, LLC
216 North Mosley Street
Wichita, KS 67202

Dear Mr. Ingalls:

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 letters dated April 17, 2015, and July 8, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of NMotion UAS, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct high definition aerial photography for public safety professionals and aerial photography and commercial inspections.

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 the DJI Phantom 3 and InstantEye Mk-2.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria

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

The Basis for Our Decision

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

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

Conditions and Limitations

In this grant of exemption, NMotion UAS, LLC is hereafter referred to as the operator.

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

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 3 and InstantEye Mk-2 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 September 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

Name and Address of Applicant:

Corey Ingalls

Technical Specialist

NMotion UAS

216 N. Mosley ST #210

Wichita, KS 67202

April 17, 2015

U.S. Department of Transportation

Docket Management System

1200 New Jersey Ave, SE

Washington, DC 20590

RE: Exemption Request under Section 333 of the FAA Modernization and Reform Act of 2012 and 14 C.F.R. Part 11

Dear Sir or Madam:

NMotion UAS, LLC (NMotion UAS) located at 216 N Mosley St Suite 210, Wichita, KS 67202 and Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("FAA Reform Act") and 14 C.F.R. Part 11, respectfully requests

exemptions from several provisions of the Federal Aviation Regulations ("FAR"), specifically Section 333 which authorizes the FAA to determine:

1. If certain 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).

We are writing to request that NMotion UAS, an owner and operator of small unmanned aircraft, be exempted from the Federal Aviation Regulations ("FARs") listed below so that NMotion UAS, may operate its small unmanned aircraft systems ("UAS") commercially in airspace regulated by the Federal Aviation Administration

("FAA"); as long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333.

NMotion UAS has been actively involved in the technical development of UAS service applications to provide high definition aerial photography for public safety professionals with small, unmanned aircraft and lightweight UAS's.

The substance of this request is essentially the same as that granted to LowCountryRC Docket Number FAA-2014-0803 in that NMotion UAS is committed in public safety, as well as, aerial photography and inspection of structures.

NMotion UAS has fully equipped each of its small unmanned aircraft for aerial photography and video, primarily for use in the public safety sector, including; law enforcement, hazmat, search and rescue, fire departments, and any other entity considered public safety. While primarily serving public safety, NMotion UAS has also equipped their UAV's for aerial photography and commercial inspections.

NMotion UAS exemption request would permit its operation of lightweight, unmanned (remotely controlled in line of sight) UAS's in tightly controlled and limited airspace. Predetermined, specifically marked areas of operation, sectioned off locations will allow NMotion UAS to operate within current safety regulations and new ones being sought. As identified, similar lightweight, remote controlled UAS's are legally operated by amateurs with no flight experience, safety plan or controls in place to prevent catastrophe.

Granting NMotion UAS's request coheres with the Secretary of Transportation's (FAA Administrator's) responsibilities to not only integrate UAS's into the national

airspace system, but to" ... establish requirements for the safe operation of such aircraft systems [UAS's] in the national airspace system" under Section 333 of the Reform Act. Further, NMotion UAS will conduct its operations in compliance with the protocols described herein or as otherwise established by the FAA.

The Extent of Relief NMotion UAS Seeks and the Reason It Seeks Such Relief:

NMotion UAS submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FAR's operating to prevent NMotion UAS contemplated commercial operations, research and other flight operations within the national airspace system. The Reform Act in Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. NMotion UAS lightweight UAS's meet the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of NMotion UAS lightweight UAS's are expressly contemplated by the Reform Act. NMotion UAS would like to operate its lightweight UAS's prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such craft. The Reform Act guides the Secretary in determining the types of UAS's that may operate safely in our national airspace system. Considerations include:

The weight, size, speed and overall capabilities of the UAS; Whether the UAS will be operated near airports or populated areas; and, Whether the UAS will be operated by line of sight.

112 P.L. 95 § 333 (a). Each of these items mitigates in favor of an exemption for NMotion UAS.

NMotion UAS’s aircraft uses multi counter-rotating propellers for extreme balance, control and stability. They each weigh less than 55 pounds, including camera or other equipment. Each of NMotion UAS’s aircraft small unmanned aircraft is designed to primarily hover in place and operate at less than a 50 knot maximum speed. They are capable of vertical and horizontal operations but operate only within the visual line of sight pilot-in-command (PIC). In addition to the PIC, NMotion UAS utilizes a qualified spotter, capable of fully operating the aircraft in such that, the PIC would encounter a medical emergency during operations.

Utilizing battery power and not combustible fuels, flights generally last between fifteen and twenty-five minutes. NMotion UAS will not, under any circumstance, operate the aircraft under twenty-five percent battery level. Safety systems in place include a failsafe mode that allows NMotion UAS aircraft to return to the GPS launch coordinates if communication with the radio control is lost or battery level becomes less than twenty five percent.

NMotion UAS does not operate its UAV's near airports and does not operate them near populated areas.

NMotion UAS operation of its small unmanned aircraft will not "create a hazard to users of the national airspace system or the public." 112 P.L. 95 § 3 3 3 (b). Given the small size and weight of NMotion UAS aircraft, combined with their operation of well-controlled areas, NMotion UAS aircrafts fall within Congress's contemplated safety zone when it published the Reform Act and the corresponding directive to integrate UAS's into the national airspace system. NMotion UAS aircraft have an outstanding safety record and do not pose any threat to the general public or national security. The FAA has the authority to issue the exemption to NMotion UAS pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the “Act").

Commercial and Public Benefits Granting NMotion UAS exemption request furthers the public interest. First, Congress has already pronounced that it is in the public’s interest to integrate commercially flown UAS's into the national airspace system, thus the passing of the Reform Act. Second, NMotion UAS conducts research into safe UAS operations every time it flies one of its UAV's. Flight data, visual inspections, recorded observations and flight analyses are compiled to further enhance current safety protocols. Granting approval of this exemption request for NMotion UAS to log more flight time will augment its ability to further enhance current safety measures.

Granting the NMotion UAS exemption request considerably furthers the public's interest in more ways than currently known. Allowing NMotion UAS to fly within the United States allows for improvements in publicly usable technologies or advancements in equipment available to law enforcement personnel and first responders with state of the art equipment that does not cost the tax payers millions.

Reasons Why NMotion UAS Exemption Will Not Adversely Affect Safety Or How The Exemption Will Provide a Level of Safety At Least Equal To Existing Rule:

NMotion UAS exemption will not adversely affect safety. Actually, for the many reasons stated, permitting NMotion UAS to gain experience and information over time will allow NMotion UAS to innovate and implement new and improved safety protocols.

NMotion UAS aircraft weigh less than 55 pounds complete with cameras.

NMotion UAS only operates its UAS's below 400 feet;

NMotion UAS UAV's operate for 5-30 minutes per flight;

NMotion UAS lands its UAS's before they reach a threshold 25% battery power;

NMotion UAS pilots operate NMotion UAS aircraft by Visual Line of Sight (VSOL) at all times.

NMotion UAS pilots have live video streamed to the ground control station should they somehow lose sight of the UAS;

NMotion UAS staffs each flight with a pilot-in-command and spotter capable of operating aircraft;

NMotion UAS aircraft have GPS flight modes whereby they return to launch if communication with the remote control is lost or battery threshold becomes less than 25%;

NMotion UAS actively examines electronic flight data and other sources of information to constantly update and enhance safety protocols;

NMotion UAS only operates in secured areas that are strictly controlled, are away from airports and populated areas;

NMotion UAS conducts extensive briefings prior to flight, during which safety carries primary importance;

NMotion UAS always obtains all necessary permissions and permits prior to operation;

NMotion UAS operationally administers a level of safety equal to and even greater than existing rules set forth. It is important to note that absent the integration of commercial UAS's into our national airspace system, helicopters are the primary means of aerial observation. While the safety record of such helicopters is incredible, it is far safer to operate a battery powered lightweight UAS. First, the potential loss of life is decreased because NMotion UAS aircraft carry no people on board and NMotion UAS only operates in areas away from major populations. Second, there is no fuel on board NMotion UAS aircraft and thus the potential for fire or explosions is highly decreased. Third, the small size and acute maneuverability of NMotion UAS aircraft allow the pilot in command to avoid hazards. Respectfully, NMotion UAS aircraft have and will always operate at and above current safety requirements.

Summary the FAA may publish in the Federal Register:

14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and the Like. 14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR§ 91.203(a)(l). The size, weight and enclosed operational area of NMotion UAS permits exemption from Part 21 because NMotion UAS aircraft meet an equivalent level of safety pursuant to Section 3 3 3 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and

A. Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports

and dense populations. NMotion UAS aircraft meet or exceed each of the elements.

14 C.F.R. 91.7 (a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual at the flight operations center. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 95658, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. § 91.121 regarding altimeter settings is inapplicable insofar as NMotion UAS aircraft utilize electronic global positioning systems and internal gyroscopes to provide spatial coordination.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining such certifications and registrations at the NMotion UAS flight operations center.

B. 14 C.F.R. § 45.23: Marking of the Aircraft.
Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. NMotion UAS aircraft are, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

C. 14 C.F.R. § 61.113: Private Pilot Privileges and Limitations. PIC
Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. NMotion UAS can achieve an equivalent level of safety as achieved by current Regulations because NMotion UAS aircraft do not carry any pilots or passengers. Further, while helpful, a pilot license will not ensure unmanned piloting skills, though NMotion UAS pilot vetting and training programs (based upon completion of an FAA Approved Ground School and a self-administered UAS flight training program and internal procedures) will. All Further, the risks attendant to the operation of NMotion UAS aircraft is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq.

D. 14 C.F.R. 91.119: Minimum Safe Altitudes.
14 C.F.R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows Helicopters to be operated at lower altitudes in certain conditions. NMotion

UAS aircraft will never operate at an altitude greater than 400 AGL. NMotion UAS will, however, operate its UAV's in sectioned off areas with security perimeters, providing a level of safety at least equivalent to those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of NMotion UAS aircraft, an equivalent level of safety will be achieved.

E. 14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections. The above-cited Regulations require, amongst other things, aircraft owners and operators to "have [the] 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."

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to NMotion UAS should its requested exemption be granted. NMotion UAS conducts an extensive maintenance program that involves regular software updates and constant inspection for assessment of any damaged hardware. Therefore, an equivalent level of safety will be achieved. NMotion UAS has researched and developed its own designs.

F. Summary

NMotion UAS seeks an exemption from the following Regulations: 14 C.F.R. 21, subpart H; 14 C.P.R. 45.23(b); 14 C.F.R. §§ 61.113 (a) & (b); 14 C.F.R. § 91.7 (a); 14 C.F.R. § 91.9 (b)(2); 14 C.F.R. § 91.103(b); 14 C.F.R. § 91.109; 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(a) and (b); 14 C.F.R. § 91.405 (a); 14 C.F.R. § 91.407 (a)(1); 14 C.P.R.§ 91.409 (a)(2); 14 C.P.R.§ 91.409 (a)(2); and, 14 C.P.R.§§ 91.417 (a) & (b) to commercially operate its fleet of small unmanned vehicles and lightweight unmanned aircraft vehicles and to conduct its own research and to develop economic platforms for aerial survey, law enforcement , first responders, search and rescue. Granting the NMotion UAS request for exemption will reduce current risk levels and thereby enhance safety.

Further, NMotion UAS operates at lower altitudes and in controlled airspace. NMotion UAS has been analyzing flight data and other information in compiling novel safety protocols and the implementation of a flight operations manual that exceeds currently accepted means and methods of safe flight. There are no people on board NMotion UAS aircraft and therefore the likelihood of death or serious bodily injury is significantly limited. NMotion UAS operation of its aircraft, weighing less than 55 pounds and traveling at speeds lower than 50 knots in cordoned off areas will provide at least an equivalent level of safety as that achieved under current FARs.

NMotion UAS respectfully requests that the FAA grant its exemption request without delay. The FAA has the authority to issue the exemption sought by NMotion UAS pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

Thank you for the time and consideration of the above Exemption Request. Please contact Mr. Corey Ingalls for more information or questions that arise.

Corey Ingalls

Corey Ingalls

Technical Specialist

NMotion UAS, LLC.

216 N Mosley St #210

Wichita, KS 67202

(316) 305-6275

corey@nmotionuas.com

Name and Address of Applicant:

Corey Ingalls

Technical Specialist

NMotion UAS

216 N. Mosley, Suite #210

Wichita, KS 67202

July 8th 2015

U.S. Department of Transportation

Docket Management System

1200 New Jersey Ave, SE

Washington D.C. 20590

U.S. DOT/FAA Request for Additional Information:

NMotion UAS Petition for Exemption (Docket No. FAA-2015-1239-0001)

To Whom it may concern:

The substance of this request is essentially the same as that granted to Unmanned Aerial Assessment & Video LLC, Docket Number FAA-2015-0018 in that NMotion UAS is committed in public safety, as well as, aerial photography and inspection of structures in the public's interest.

Request for an exemption from §§ 45.23(b), 61.113 (a) and (b), 91.7 (a), 91.9 (b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405 (a), 91.407 (a)(1), 91.409 (a)(2), 91.409 (a)(2), 91.417 (a) and (b), and Subpart H of part 21 of Title 14, Code of Federal Regulations (14 CFR).

Public Interest

In compliance with the requirements of § 11.81, granting the petition would be in the public interest because:

The Congress of the United States has determined that early accommodation of sUAS into the National Airspace System advances the public interest. The Committee Report leading the House to adopt H.R. 658 said:

"The successful integration of unmanned aircraft systems (UAS) into the National Airspace System (NAS) can support more than 23,000 high-paying jobs in the United States. . . . The absence of a plan to integrate UASs into the NAS is a barrier to such job creation . . . ."

1.) Granting the Petition represents a step toward such integration, in the absence of a comprehensive regulatory regime for sUAS, and thus would serve the Congressional goal and the public interest.

2.) Granting the Petition will facilitate a new era in emergency response activities, one in which the responders themselves will have a tool to safely, quickly and remotely assess a situation without placing lives in harm's way. In comparison, the EOD robots have saved countless lives since their inception, a feat that will become common place for aerial assessments.

3.) Granting the Petition will enable Petitioner to demonstrate the commercial viability of creating new safety techniques and tactics with new aeronautical technology, thereby improving the efficiency of emergency responders around the world and making for a safer society.The rules from which Petitioner seeks exemption artificially and irrationally limit the effective use of new technologies to expand emergency response safety and improve the efficiency of markets, thereby subverting the public interest.

4.) Granting the Petition will fulfill the FAA's own declaration that encouraging new aviation technologies advances the public interest. The FAA itself has recognized the public interest in its role of "Encouragingand developing civil aeronautics, including new aviation technology." Granting the Petition willenhance FAA fulfillment of that commitment, thereby serving the public interest. Air commerceflourishes in the United States because of the rapid pace of innovation in aeronautical and associated technologies, followed by their commercialization and their introduction into the marketplace. The sUAS technology that the Petitioner uses exemplifies the latest innovative leap forward in aeronautical technology. Preventing it from using this in air commerce subverts achievement of the goal.

5.) Granting the Petition will fulfill the Congressional determination that integrating sUAS technology into the NAS serves the public interest. Section 330 of the FAA Modernization and Reform Act of 2012, specifically recognizes the advantages to air commerce obtainable from the deployment of sUAS technologies. It mandated several steps by the FAA to accelerate the availability of these technologies in the National Airspace System, thereby representing a congressional determination that the public interest is served by making these technologies

more widely available at the earliest practicable date. The Petition represents a way for the FAA to move incrementally, while still satisfying its congressional mandate and meeting its obligation to enhance the public interest by making new technologies available by allowing the use of sUAS technologies in a manner that protects the public and the rest of the aviation community from significant risk. The commercial activities by Petitioner proposed in the Petition represent contributions to new forms of air commerce, thereby fulfilling the FAA's statutory mandate under the 2012 Act.

6.) Granting the Petition will enhance aviation safety, thereby advancing the public interest. The Petitioner has committed itself in the Petition to safety practices that reduce or eliminate hazards to aircraft in the National Airspace System and to persons and property on the ground. Many others are flying sUAS without regard to these hazards. Granting the Petition will offer the Petitioner up as an example of how the FAA is willing to accommodate the new technology when it is constrained by appropriate limitations to enhance safety. It will also allow the Petitioner to be a role model for safe commercial sUAS operations. Users of the National Airspace System are confronted by mushrooming threats from sUAS flown in defiance of the FAA's ban. Unless the FAA shows some flexibility to accommodate lawful and safe operation of sUAS for legitimate commercial purposes, the level of defiance will increase, intensifying the hazards to manned aircraft and to persons and property on the ground. The Petitioner's proposed operations satisfy the criteria provided in Section 333 of the Reform Act relating to size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight, and national security. The Petition justifies grant of the requested exemptions to allow the Petitioner to commercially provide sUAS to organizations.

Thank you for the time and consideration. Please contact Mr. Corey Ingalls for more information or questions that arise.

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