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

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

July 14, 2015

Exemption No. 12033
Regulatory Docket No. FAA–2015–1302

Mr. Manfred M. Marotta
Unmanned Services Inc.
314 South Main Street
Suite 1
Versailles, KY 40383

Dear Mr. Marotta:

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 April 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Unmanned Services Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, surveying, mapping, inspection, and data collection.

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 are the DJI Phantom 2, DJI Phantom Vision+ and DJI S1000.

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

[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, Unmanned Services Inc. is hereafter referred to as the operator.

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

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2, DJI Phantom Vision+ and DJI S1000 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 July 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

Unmanned Services Inc.
314 S. Main St.
Suite 1
Versailles, KY 40383
Phone: (267) 614-1345

April 17, 2015

U. S. Department of Transportation, Docket Operations
West Building Ground Floor, Room W12-140
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Exemption Request Pursuant to Section 333 of the FAA Reform Act of 2012 and Part 11 of the Federal Aviation Regulations from: 14 CFR 61.23(a) & (c); 14 CFR 61.101 (e) (4) & (5); 14 CFR 61.113 (a); 14 CFR 61.315 (a); 14 CFR 91.7 (a); 14 CFR 91.119 (c); 14 CFR 91.121; 14 CFR 91.151 (a) (1); 14 CFR 91.405 (a); 14 CFR 91.407 (a) (1); 14 CFR 91.409 (a) (1) & (2); 14 CFR 91.417 (a) & (b)

Dear Exemption Manager,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and 14 C.F.R. Part 11, Unmanned Services Inc. (USI) herein after also known as the operator, is an operator of small Unmanned Aircraft Systems (sUAS) or Unmanned Aircraft (UA). USI is an aviation technology and services company that plans to exploit the capabilities of UA to offer a multitude of services, including:

- Aerial surveying, mapping and data collection
- Remote sensing
- Educational and research operations
- Wildlife and forestry monitoring
- Aid in disaster and emergency management and monitoring, civil first response, communications relay, search and rescue, monitoring fire hazards, cleanup effort supervision, damage assessment and estimation
- Aid civil engineering: waterways and shipping, forestry, fishery protection, pollution control and air sampling and crop performance
- Railroad and motor-vehicle road inspection
- Telecommunications infrastructure inspection
- Utility, Energy systems and electrical engineering inspections and asset management
- Agricultural surveying and produce field management
- Livestock management and accountability

- Unmanned aircraft flight school
- Aerial filmmaking and photography
- Construction site inspections and monitoring
- Oil and gas pipeline inspection/patrolling and oil-field inspection
- Real estate and marketing
- Aerial event security, surveillance and crowd management
- Aerial imagery evidence for property insurance claims

USI hereby applies for an exemption from the listed Federal Aviation Regulations (FARs) to allow commercial operation of their UA, with full understanding that operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333. As described more fully below, the requested exemption would permit the operation of small, unmanned and relatively inexpensive UA under controlled conditions in the National Airspace System (NAS) regulated by the Federal Aviation Administration (FAA). Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's (the FAA Administrator's) responsibilities to "...establish requirements for the safe operation of such aircraft systems in the national airspace system." Section 333(c) of the Reform Act.

The name and address of the applicant is:

Unmanned Services Inc.
Attn: Manfred M. Marotta
314 S. Main St.
Suite 1
Versailles, KY 40383
Phone: (267) 614-1345
Email: mmarotta@unmannedservicesinc.com

Regulations from which the exemption is requested:

- 14 CFR 61.23 (a) & (c) – Medical certificates: Requirements and duration
- 14 CFR 61.101 (e) (4) & (5) – Recreational pilot privileges and limitations
- 14 CFR 61.113 (a) – Private pilot privileges and limitations: Pilot in command
- 14 CFR 61.315 (a) – What are the privileges and limits of my sport pilot certificate?
- 14 CFR 91.7 (a) – Civil aircraft airworthiness
- 14 CFR 91.119 (c) – Minimum safe altitudes: General
- 14 CFR 91.121 – Altimeter settings
- 14 CFR 91.151 (a) (1) – Fuel requirements for flights in Visual Flight Rules (VFR) conditions
- 14 CFR 91.405 (a) – Maintenance required
- 14 CFR 91.407 (a) (1) – Operation after maintenance, preventative maintenance, rebuilding, and alteration
- 14 CFR 91.409 (a) (1) & (2) – Inspections
- 14 CFR 91.417 (a) & (b) – Maintenance records

Regulatory Basis for Exemption Request

This exemption application is expressly submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the national airspace system (NAS) before completion of the rulemaking required under Section 332 of the Reform Act. In making this determination, the Secretary is required to determine which types of UA do not create a hazard to users of the NAS or the public or pose a threat to national security in light of the following:

- The UA's size, weight, speed, and operational capability;
- Operation of the UA in close proximity to airports and populated areas
- Operation of the UA within visual line of sight of the operator.

The aircraft intended for use by the operator includes the DJI Phantom 2, DJI Phantom 2 Vision+ (Plus) & DJI S1000. All of these aircraft have previously been approved by the FAA in other applicant's Section 333 exemptions. Exemptions Nos. 11278, 11275, 11267, 11260, 11253 and 11230.

Reform Act § 333 (a). Lastly, if the Secretary determines that such vehicles "may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft in the national airspace system." Id. §333(c) (emphasis added).

The Federal Aviation Act expressly grants the FAA the authority to issue exemptions. This statutory authority by its terms includes exempting civil aircraft, as the term is defined under §40101 of the Act, which includes UA, from the requirement that all civil aircraft must have a current airworthiness certificate.

The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any sections 44702-44716 of this title if the Administrator finds the exemption in the public interest. 49 U.S.C. §44701(f) See also 49 USC §44711(a); 49 USC §44704; 14 CFR §91.203 (a) (1).

Unmanned Services Inc.'s UA are rotorcraft, weighting 55 or fewer pounds including payload. The UA operate under normal conditions at a speed of no more than 50 knots and have the capability to hover and move in the vertical and horizontal plane simultaneously. The UA will be operated only in line of sight and will be operated only within a predetermined and protected flight area under the permission of the property representative. The UA will be operated under the below listed limitations and conditions to which the operator agrees to be bound when conducting commercial operations under an FAA issued exemption, as well as any other limitations the FAA may place on future operations. Such operations will insure that the UA will "not create a hazard to users of the national airspace system or the public as per the Reform Act Section 333 (b).

Given the clear direction in Section 333 of the Reform Act, the authority contained in the Federal Aviation Act, as amended; the strong equivalent level of safety surrounding the proposed operations, and the significant public benefit, including enhanced safety, reduction in environmental impacts, including reduced emissions associated with allowing UA for aerial data collection, the grant of the requested exemptions is in the public interest. Accordingly, the applicant respectfully requests that the FAA grant the requested exemption without delay.

The FAA has issued grants of exemption in circumstances similar in material respects to those presented in this petition. In Exemptions Nos. 11280, 11279, 11278, 11275, 11273, 11271, 11269, 11267, 11260, 11253, 11250, 11230, 11213, 11112, 11109

Aircraft and Equivalent Level of Safety

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

The UA to be operated hereunder are rotorcraft weighing less than 55 pounds including payload, carries neither a pilot nor passenger. Carries no explosive materials or flammable liquid fuels, and operates exclusively within visual line of sight of the pilot in command (PIC) and a visual observer (VO). They operate at a speed of less than 50 knots and have the capability to hover and move in the vertical and horizontal plane simultaneously within a predetermined and protected flight area as described below. Such operations will insure that the UASs will not create a hazard to the users of the national airspace system. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator and under the requirements and in compliance with local public safety requirements, to provide security for the area of operation. The FAA will have advance notice of all operations. These safety enhancements provide a greater degree of safety to the public and property owners than conventional operations conducted with airworthiness certificates issued under 14 C.F.R. Part 21, Subpart H. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the UA, due to its size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load.

The Secretary of Transportation has previously determined that these aircraft meets the conditions of Section 333. Therefore, the FAA has found that request of relief from 14 CFR part 21, and any associated noise certification and testing requirements of part 36, is not necessary. This has been stated in exemptions to this regulation in Exemptions Nos. 11280, 11279, 11278, 11275, 11273, 11271, 11269, 11267, 11260, 11253, 11250 and 11230

The applicant proposes that the exemption requested herein apply to aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure.

These limitations and conditions to which the operator agrees to be bound when conducting commercial operations under an FAA issued exemption include:

1. The UA; DJI Phantom 2, DJI Phantom Vision+ and DJI S1000+ will weigh less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend the exemption.
2. Operations for the purpose of closed-set motion picture and television filming are not permitted.
3. The UA will 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 200 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. The exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in the 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 the exemption and the procedures outlined in the operating documents, the conditions and limitations therein 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 the grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted the 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 the exemption must comply with all manufacturer safety bulletins.
13. 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 Colombia, 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.
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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 predetermined 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.
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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 the 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.

Unless otherwise specified in the 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.

14 CFR § 61.23 (a) & (c): Medical certificates: Requirements and duration.

This regulation sets forth medical certificate requirements for pilots-in-command of aircraft in that a holder must have a first-class medical certificate when exercising the PIC privileges of an airline transport pilot certificate. Furthermore, the requirement states that the PIC must hold at least a second-class medical certificate when exercising PIC privileges of a commercial pilot certificate, or must hold at least a third-class medical certificate when exercising PIC privileges of a private pilot certificate, recreational pilot certificate, or flight instructor certificate. It also states that a person must hold and possess either a medical certificate issued under § 61.67 or a U.S. driver's license when exercising the privileges of a PIC of a sport pilot certificate in a light-sport aircraft other than a glider or balloon.

The FAA is granting relief from § 61.23(a) to allow any pilot that holds one of the pilot's certificates (discussed above) to operate a UAS with a U.S. issued driver's license, in lieu of an FAA-issued medical certificate. The FAA is also granting relief from § 61.23(c) to allow sport pilot certificate holders to operate aircraft other than LSA with a U.S. issued driver's license. The FAA has issued the following

exemptions to this regulation: Exemption Nos.11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 61.101 (e) (4) & (5): Recreational pilot privileges and limitations.

This section limits recreational pilots to non-commercial operations and that they may not act as pilot in command of a recreational aircraft for compensation or hire, or in the furtherance of a business. Unlike a conventional aircraft that carries the pilot and passengers, the UA is remotely controlled with no living thing on board. The area of operation will be predetermined and in a protected flight area under the permission of the property representative, and all flights are planned and coordinated in advance. The FAA has issued the following exemptions to this regulation: Exemption Nos.11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 61.113 (a): Private Pilot Privileges and Limitations: Pilot in Command.

This section limits private pilots to non-commercial operations and that they may not act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire. Unlike a conventional aircraft that carries the pilot and passengers, the UA is remotely controlled with no living thing on board. The area of operation will be predetermined and in a protected flight area under the permission of the property representative, and all flights are planned and coordinated in advance. The FAA has issued the following exemptions to this regulation: Exemption Nos.11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 61.315 (a): What are the privileges and limits of my sport pilot certificate?

This section limits sport pilots to non-commercial operations and that they may not act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire, or in the furtherance of a business. They also may not carry more than one passenger, fly at night, and under other restrictions that are outside of the scope of intended flights of the UA. Unlike a conventional aircraft that carries the pilot and passengers, the UA is remotely controlled with no living thing on board. The area of operation will be predetermined and in a protected flight area under the permission of the property representative, and all flights are planned and coordinated in advance. The FAA has issued the following exemptions to this regulation: Exemption Nos.11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 91.7(a): Civil aircraft airworthiness.

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft for maintenance and use of preflight actions as prescribed by the aircraft's manufacturer prior to each flight, and given the FAA's prior approval of the same types of aircraft to be used in previous exemptions to this requirement (as set forth in Exemptions Nos. 11278, 11275, 11267, 11260, 11253 and 11230) we believe we can maintain a high standard of safety and due regard as to the aircraft's airworthiness during flight

operations. The FAA has issued the following exemptions to this regulation: Exemption Nos.11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 91.119 (c): Minimum safe altitudes.

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119 (d) allows helicopters to be operated at less than the minimums prescribed, provided the person operating the helicopter complies with any route or altitudes prescribed for helicopters by the FAA. As this exemption is for UAS that are rotorcraft and the exemption requests authority to operate at altitudes up to 200 feet AGL, an exemption may be needed to allow such operations. As set forth herein, the UA will never operate at higher than 200 feet AGL, will always be operated under VLOS of both the PIC and VO, its area of operation will be predetermined and in a protected flight area under the permission of the property representative, all flights are planned and coordinated in advance and the UA will remain clear of, and give way to all manned aviation operations and activities at all times.

The equivalent level of safety will be achieved given the size, weight, speed of the UA as well as the location where it is operated and under the conditions previously stated. Compared to flight operations with aircraft or rotorcraft weighting far more than the maximum 55pounds proposed herein and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented with conventional aircraft operating at or below 500 feet AGL. In addition, the low-altitude operations of the UA will ensure separation between these small- UAS operations and the operations of conventional aircraft that must comply with Section 91.119. The FAA has issued the following exemptions to this regulation: Exemptions Nos. 11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 91.121: Altimeter Settings.

This regulation requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "...to the elevation of the departure airport or an appropriate altimeter setting available before departure." As the UA may not have a barometric altimeter, but instead a GPS altitude read out, an exemption may be needed. An equivalent level of safety will be achieved by the operator, pursuant to the manufacturer's published procedures and live flight data monitoring, confirming the altitude of the launch site shown on the GPS altitude indicator before flight. In the event that the GPS altitude read out system becomes none functional during flight, the UA will also have a pre-programmed maximum flight limit of 200 feet programmed into them so that they may not fly above unapproved altitude limits. The FAA has issued the following exemptions to this regulation: Exemptions Nos. 11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 91.151(a) (1): Fuel Requirements for Flight in VFR Conditions.

Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed – (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes."

The LiPo battery powering the DJI Phantom 2 & DJI Phantom Vision + UA provides approximately 20 minutes of powered flight while the LiPo battery powering the DJI S1000 provides approximately 30 minutes of flight. The PIC will not begin a flight unless 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.

Applicant believes that an exemption from 14 CFR §91.151(a) falls within the scope of prior exemptions, and that flight with less than 30 minutes of reserve fuel, does not engender the type of risks that Section 91.151(a) was intended to alleviate given the size and speed of the small UAS. Similar exemptions have been granted to other operations, including Exemptions Nos. 11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

14 CFR § 91.405 (a); 407 (a) (1); 409 (a) (1) & (2); 417(a) & (b): Maintenance Inspections.

These regulations require that an aircraft operator or owner "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...," and others shall inspect or maintain the aircraft in compliance with Part 43. Given that these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to the applicant.

An equivalent level of safety will be achieved because these small UASs are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the UA can land immediately and will be operating from no higher than 200 feet AGL and within VLOS of the PIC and VO. 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. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components. The FAA has issued the following exemptions to this regulation: Exemptions Nos. 11278, 11275, 11269, 11267, 11260, 11256, 11253, 11252, 11240 and 11230.

Privacy

All flights will occur over private or controlled access property with the property representative or owner's prior consent and knowledge. Filming will be of people who have also consented to being filmed or otherwise have agreed to be in the area where filming will take place.

All flights will occur in accordance with any state or local laws regarding privacy.

Additional Views, Information & Summary

USI senior management collectively have 26 years of experience in unmanned aircraft flight operations. Past performance include conducting flight operations support services to Military, Academia and the Defense Aerospace industry flying rotorcraft, fixed-wing and lighter than air (LTA) aircraft of sizes from

2 pounds up to 3,000 pounds at take-off. We have flown large UA from an international airport with other commercial aircraft, so we make safety paramount, but we also know that integrating and operating in congested airspace along with manned aircraft is possible without incident. Senior Management alone have safely conducted over 9,100 flight hours, incident free.

Unmanned Services Inc. (USI) was established January, 2011 and is a Service-Disabled Veteran-Owned Small Business. Experienced personnel include: Internal & External Pilots, Mission Commanders, Sensor Operators, Maintenance Technicians, Program Managers, Logisticians, Tech Writers and Engineers. All of these personnel have had formal training from universities, military schools and/or have received training from the aircraft and system manufacturers themselves. This demonstrates that our personnel take their profession and safety serious and are not laypersons much like informally trained R/C (remote controlled) pilots.

As a public benefit Unmanned Services Inc. will advance:

-Research into future safety guidelines for the use of UAS,

-Reduction in dangers by limiting the use of larger rotorcraft or fixed-wing aircraft,

-Reducing carbon emissions, &

-Advancement of science through advanced data collection

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Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

Applicant seeks an exemption from the following rules:

14 CFR 61.23(a) & (c); 14 CFR 61.101 (e) (4) & (5); 14 CFR 61.113 (a); 14 CFR 61.315 (a); 14 CFR 91.7 (a); 14 CFR 91.119 (c); 14 CFR 91.121; 14 CFR 91.151 (a) (1); 14 CFR 91.405 (a); 14 CFR 91.407 (a) (1); 14 CFR 91.409 (a) (1) & (2) and 14 CFR 91.417 (a) & (b) to operate commercially a small unmanned vehicle (55pounds or less) for the purpose of aerial surveying, mapping and data collection; remote sensing; educational and research operations; wildlife and forestry monitoring; aid in disaster and emergency management and monitoring, civil first response, communications relay, search and rescue, monitoring fire hazards, cleanup effort supervision, damage assessment and estimation; aid civil engineering: waterways and shipping, forestry, fishery protection, pollution control and air sampling and crop performance; railroad and motor-vehicle road inspection; telecommunications infrastructure inspection; utility, energy systems and electrical engineering inspections and asset management; agricultural surveying and produce field management; livestock management and accountability; unmanned aircraft flight school; aerial filmmaking and photography; construction site inspections and monitoring; oil and gas pipeline inspection/patrolling and oil-field inspection; real estate and marketing; aerial event security, surveillance and crowd management and aerial imagery evidence for property insurance claims.

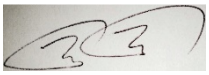
Approval of exemptions allowing commercial operations of UA in the listed industries will enhance safety by reducing risk. Conventional flight operations using jet, piston or multi-engine powered aircraft occasionally operate at extremely low altitudes to complete some of the requested uses and in extreme proximity to people and structures. This presents associated risks as these vehicles weigh in excess of 3,000 pounds and carry large amounts of jet A or other fuel. Such aircraft must fly to and from the mission location. In contrast, a UA weighing fewer than 55 pounds, powered by batteries, virtually

eliminates all of the above risks given the UA's reduced mass and lack of combustible fuel carried on board. The UA is carried to the mission site. The UA will carry no passengers or crew, therefore, the UA will not expose them to the risks associated with manned aircraft flights.

The operation of small UASs, weighting less than 55 pounds, conducted in the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein, including exempting the applicant from the requirements of Part 21 and allowing commercial operations. These lightweight aircraft operate at slow speeds, close to the ground but under 200 feet AGL, and within visual line of sight of the pilot in command and a visual observer. As a result, the small UASs are far safer than conventional flight operations conducted with large manned aircraft.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012--size, weight, speed, operating capabilities, proximity to airports and populated areas, operation within visual line of sight, national security and the significant public benefit as well as the positive economic impacts – provide more than adequate justification for the grant of the requested exemptions allowing commercial operation of applicant's UA. Granting Unmanned Services Inc. the above exemptions will allow for the expansion of UAS systems into the future, in a professional, safety conscious culture steeped in the tradition of Aviation. Unmanned Services Inc. respectfully requests that the FAA grant its exception without delay. The FAA has the authority to issue the exemption sought by Unmanned Services Inc. pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

Sincerely,



Manfred M. Marotta

Unmanned Services Inc, President