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

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

July 29, 2015

Exemption No. 11605A
Regulatory Docket No. FAA-2015-0516

Ms. Becky Morton
President
GeoWing Mapping, Inc.
71 Stevenson Street, Suite 400
San Francisco, CA 94105

Dear Ms. Morton:

This letter is to inform you that we have granted your petition for an amendment. It explains the basis for our decision, describes its effect, and lists any changes to the original conditions and limitations.

By letter dated May 15, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of GeoWing Mapping, Inc. (hereinafter petitioner or operator) for an amendment to your current exemption. That exemption from §§ 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) of Title 14, Code of Federal Regulations (14 CFR) allows the petitioner to operate a UAS to perform aerial data collection. You requested an amendment to add the DJI Phantom 2 Vision +, DJI Phantom 3, DJI Inspire 1, DJI Spreading Wings S900, DJI Spreading Swings S1000, DJI Spreading Wings 1000 +.

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner. The unmanned aircraft authorized in the original grant are comparable in type, size, weight, speed and operating capabilities to those in this petition.

Airworthiness Certification

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, C*ertification procedures for products and parts, Subpart H—Airworthiness Certificates,* and any associated noise certification and testing requirements of part 36, is not necessary.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 11605 remains valid and is in the public interest. Therefore, under the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, the operator is granted an amendment to add new aircraft to its UAS operations.

The operator shall add this amendment to its original exemption.

Conditions and Limitations

All conditions and limitations within Grant of Exemption No. 11605 remain in effect except as follows. Condition No. 1 has been updated to reflect the additional aircraft.

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 Altavian Nova F6500, DJI Phantom 2 Vision +, DJI Phantom 3, DJI Inspire 1, DJI Spreading Wings S900, DJI Spreading Wings S1000, DJI Spreading Wings 1000 + 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.

This exemption terminates on May 31, 2017, unless sooner superseded or rescinded.

Sincerely,

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

5/15/2015

U.S. Dept. of Transportation, Docket Operations
West Building Ground Floor, Room w12-140
1200 New Jersey Avenue, SE.,
Washington, DC 20590

Addendum
Exemption/Rulemaking
Regulatory Docket No. FAA-2015-0516

Submitted Electronically via the Federal Docket Management System (FDMS)

Re: Addendum to add additional Unmanned Aerial Systems to current Exemption/Rulemaking request

Dear Sir or Madam:

I, Rebecca Morton, President of GeoWing Mapping, Inc., have prepared the following addendum to our Current Exemption/Rulemaking request filed on February 27th 2015.

This Addendum allows for the inclusion of four additional Vertical Take-Off and Landing (VTOL) Multi-Rotor UA's as follows:

- DJI Phantom 2 Vision+
- DJI Phantom 3
- DJI Inspire 1
- DJI Spreading Wings S900
- DJI Spreading Wings S1000
- DJI Spreading Wings S1000+

THE UNMANNED AIRCRAFT (UA):

- The DJI Models: Phantom 2 Vision +, Phantom 3, Inspire 1, S900, S1000, and S1000+ are lightweight (under 55lb gross weight), battery operated Multi-Rotor VTOL aircraft
- Each uses an on-board flight computer with GPS navigation and location ability that receives signals for flight controls from a ground-based transmitter/controller
- Each have an on-board camera attached to the UA via a three axis gimbal, capable of capturing full color, high definition imagery
- Each has an on-board telemetry system that delivers flight data from the on-board flight computer to the on-board radio transmitter including; altitude (AGL), horizontal and vertical speed, compass direction of flight, and direction back to its launch site

THE GROUND STATION-BASED PART OF THESE SYSTEMS:

- A Pilot in Command (PIC) in operational control of a flight operation from beginning to end and who controls the UA while in the air
- A radio transmitter/controller operated by the (PIC) to control the UA while in flight
- A Ground Station (Laptop, Tablet or Smart Phone based App) which receives and displays real time system telemetry and imagery from the UA
- A Visual Observer (VO) is a person who provides a second pair of eyes to visually track the UA while in flight.

This Addendum makes no other changes to the original request including exemptions sought, reasons for exemption request, and/or operating parameters. GeoWing Mapping, Inc., will operate these additional UA's under the same conditions and limitations provided in the original Exemption/Rulemaking request.

The name and contact information of the applicant remains the same:

Sincerely,

Rebecca Morton (Becky)
President
GeoWing Mapping, Inc.
Phone: 415.655.6878
Email: becky@geowingmapping.com

Appendix A – Proposed Multi-Rotor Operating Procedures
Appendix B – Users Manuals

APPENDIX A – MULTI ROTOR OPERATING PROCEDURES

MULTI ROTOR PRE-FLIGHT CHECKLIST

Once on site the Pilot-In-Command (PIC) and a Visual Observer (VO) will:

- Assess the area for potential hazards
- Determine the take-off and landing (return to home) location
- Place signage if necessary noting survey in progress
- Brief all personnel present on the upcoming aerial acquisition
- Instruct those not involved in the aerial acquisition on a safe viewing location

The PIC and VO will then move all equipment necessary to the launch location.

At this time the PIC and/or VO will go through the preflight checklists provided by the manufacturer of the UA. Example below.

- Remove the UAS from its case
- Insert battery
- Install and/or confirm propellers are tightened
- Connect the Ground Station device to the Flight Controller
- Turn on the Flight Controller and Ground Station Device
- Turn the UAS on and run system checks
- Ensure communications between the UAS, Flight Controller and Ground Station Computer are operating properly

If everything appears to be operating correctly the PIC will then begin the mission.

TAKE OFF/LANDING PROCEDURES

Manufacturer recommended Takeoff and Landing procedures will be followed. Example below.

Place the UA on ground with the battery level indicator facing you.

1. Power on the remote controller.
2. Power on the range extender.
3. Switch the camera to the “WIFI ON” position.
4. Power on the aircraft by turning on the intelligent battery
5. Connect the mobile device or laptop to the UA, run the Ground Station App to enter the camera preview page.
6. Wait until the UA is initializing and entering the “Ready to Fly”/“Ready to Fly (non-GPS).” state. Then proceed to execute the CSC command to start motors.
7. Push the throttle stick up slowly to lift the aircraft off the ground.
8. When landing, be sure to be hovering over a level surface. Pull down on the throttle stick gently to descend and land.
9. After landing the aircraft on the ground, keep the throttle stick at its lowest position for about 3 to 5 seconds which will automatically stop the motors.

DJI MULTI ROTOR FAILSAFE FUNCTION

The UA will enter Failsafe mode when the connection from the remote controller is lost. The flight control system will automatically control the aircraft to return to home and land to reduce injuries or damage. The following situations would make the aircraft fail to receive a signal from the remote controller and enter Failsafe mode:

1. The remote controller is powered off.
2. The aircraft has flown out of the effective communication range of the remote controller.
3. There is an obstacle obstructing the signal between the remote controller and the aircraft, essentially reducing the distance the signal can travel.
4. There is interference causing a signal problem with the remote controller.

Upon completion of mission the PIC will log information about the flight while the VO advises those in the area that the mission is complete, removes any signage and begins breakdown of the UA

APPENDIX B – USERS MANUALS (Phantom 2 Vision +, Phantom 3, Inspire 1, S900, S1000 and S1000+)

Users Manuals for each of these systems can be downloaded here

http://www.dji.com/product/phantom-2-vision-plus/download

http://www.dji.com/product/phantom-3/download

http://www.dji.com/product/inspire-1/download

http://www.dji.com/product/spreading-wings-s900/download

http://www.dji.com/product/spreading-wings-s1000-plus/download

http://www.dji.com/product/spreading-wings-s1000/download

Upon request these will be provided