RD Group
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To: Docket Operations M-30
US Department of Transportation (DOT)
1200 New Jersey Ave., SE
Room W12-140
West Building Ground Floor
Washington, DC 20590-0001

From: RD Group
David w Mansen
10736 Vista Heights Blvd.
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Date: 29 Sep 2013

Re: Exemption request pursuant to Section 333 of the FAA Modernization and Reform Act of 2012

In accordance with the FAA Modernization and Reform Act of 2012 (FMRA), Section 333 (Special Rules for Certain Unmanned Aircraft Systems) RD Group seeks an exemption from listed FAA regulations to permit COMMERCIAL operation of small Unmanned Aircraft System (sUAS).

RD Group specifically requests an exemption from FAA Regulations to permit COMMERCIAL operation of small Unmanned Aircraft System (sUAS).

Enclosed are the following documents to support our exemption request:

FAA Section 333 Exemption Request
"Flight, Maintenance & Operations Manual" (Proprietary)
"Training Manual" (Proprietary)
"Flight Dispatch" Form (Proprietary)
"Authority to Photograph" Form (Proprietary)

FAA has permission to utilize any and all RD Group proprietary documents as necessary to facilitate approval of this requested exemption.

We will gladly discuss any changes, modifications or amendments to our manuals, procedures or practices to satisfy FAA requirements for approval of this exemption.

Thank you,

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Section 333
Exemption Request

This section 333 exemption request may be published in the Federal Docket.	Document No.: DP1001
	Initial Release: 29 Sep 2014
	Revision Number: 00
	Revision Date: 29 Sep 2014

Section 333 Exemption Request - *RD Group*

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Date: 29 Sep 2013

Re: Exemption request pursuant to Section 333 of the FAA Modernization and Reform Act of 2012

In accordance with the FAA Modernization and Reform Act of 2012 (FMRA), Section 333 Special Rules for Certain Unmanned Aircraft Systems, RD Group seeks an exemption from FAA regulations restricting COMMERCIAL operation of small Unmanned Aircraft System (sUAS).

RD Group specifically requests an exemption from FAA Regulations to permit COMMERCIAL operation of small Unmanned Aircraft System (sUAS).

Enclosed are the following documents to support our request for an exemption:

FAA Section 333 Exemption Request
"Training Manual" (Proprietary)
"Flight, Maintenance & Operations Manual" (Proprietary)
"Flight Dispatch form" (Proprietary)
"Authority to Photograph form" (Proprietary)

RD Group policies, practices, procedures and flight limitations are described in detail in the RD Group Flight "Maintenance & Operations Manual" and in the RD Group "Training Manual".

1) Regulations Seeking Exemption From

Listed below (but not all inclusive) are FAA regulations for which RD Group is seeking an exemption.

1) 14 CFR § 21
2) 14 CFR § 45.23 (b)
3) 14 CFR § 61.113 (a) and (b)
4) 14 CFR § 91.7 (a)
5) 14 CFR § 91.9 (b)(2)
6) 14 CFR § 91.103
7) 14 CFR § 91.109
8) 14 CFR § 91.119
9) 14 CFR § 91.121
10) 14 CFR § 91.151 (a)
11) 14 CFR § 91.2103 (a) and (b)
12) 14 CFR § 91.405 (a)
13) 14 CFR § 91.407 (a) (1)
14) 14 CFR § 91.409 (a) (2)
15) 14 CFR § 91.417 (a) and (b)

2) About Us

RD Group is an American owned and operated company that performs commercial aerial photography and aerial inspection services. In the United States we utilize certified manned aircraft and certified manned helicopters with a pilot who holds a FAA Commercial Pilot License. In numerous international countries we are permitted by law to utilize small Unmanned Aircraft System (sUAS). This permits increased flexibility and higher quality images at a greatly reduced economic cost. However in the United States (our country of residency and citizenship) we are permitted to fly a sUAS only for hobby or for recreational purposes (commercial operation is prohibited).

RD Group is owned and operated by Mr. David w Mansen.

With over thirty years experience in the airspace industry interacting with the FAA as a Pilot, as a Part 145 Maintenance Inspector and as a Part 145 Repair Station FAA Accountable Manager Mr. Mansen has demonstrated an exemplary record of safe operation and of adherence to FAA regulations.

Mr. Mansen currently holds a FAA Private Pilot License with ASEL (airplane single engine land) and AMEL (airplane multi engine land) ratings. Since the issuance of this license in the early 1980's, Mr. Mansen has had ZERO FAA safety incidents, ZERO FAA infractions, and ZERO FAA citations – an impeccable and spotless record of adherence to safety and adherence to FAA regulations.

Mr. Mansen founded TexasGYRO (T69R487X) a FAA Part 145 Licensed Aircraft Maintenance facility and through smart business practices, a relentless pursuit of safety and adherence to FAA regulations was able to sell TexasGYRO as a successful business after ten years of operation.

Mr. Mansen served as the FAA Accountable Manager at TexasGYRO for ten years with ZERO FAA safety incidents, ZERO FAA infractions, and ZERO FAA citations. Mr. Mansen has proven that he has the skill, knowledge and experience necessary to install a successful training program and to manage and operate a FAA Certified Aerospace facility. Mr. Mansen has an impeccable record of safety and adhering to FAA regulations.

3) sUAS Discussion

Hobbyist and aircraft enthusiast have been safely flying remotely controlled aircraft for decades. In June of 1981 the FAA publish AC 91-57 (Model Aircraft Operating Standards). This set the standard for operation by which we have safely abided by for over thirty years.

Accepted safe practices for hobby and recreation flying of a remotely controlled aircraft are that a vehicle must weigh less than 55 lbs., must be operated within line-of-sight of the operator and must not exceed an operating altitude of 400 feet AGL (above ground level).

Technology advances – Time passes. With todays we have the capability to mount a lightweight still or video camera in a remotely controlled aircraft and monitor this video feed in real-time during flight. This ability to capture images has built the foundation by which sUAS commercial operation desires to operate.

* * *

With the technology available today the safety of a sUAS has been increased dramatically. On-board todays sUAS there is an intelligent Flight Control System with built-in GPS providing accurate position information.

Telemetry provides real-time data to the Flight Operator (Pilot) with altitude (AGL), flight speed and distance from the Flight Operator (Pilot). The Flight Operator (Pilot) is also provided in real-time the available remaining battery power for flight and the number of GPS satellites in view. A "radar style display" provides real-time relative location and heading from the Flight Operator (Pilot).

The Flight Operator (Pilot) is no longer estimating his/her altitude, speed, distance and heading or available flight power. He/she views these critical flight parameters live and in real-time.

The intelligent Flight Control System onboard the sUAS is programmed via software to limit the flight altitude to 400 feet AGL. There will be no inadvertent flight above the restricted operating altitude.

The intelligent Flight Control System coupled with GPS position information provides the ability for the Flight Operator (Pilot) to permit the sUAS to auto-hoover in position with compensation for wind drift.

The intelligent Flight Control System coupled with GPS position information provides the ability for the Flight Operator (Pilot) to command (at the push of a button) the sUAS to automatically return to its point of departure.

The sUAS will return to its point of departure automatically in the event of a loss of RF Control from the Flight Operator (Pilot).

* * *

All sUAS flights are performed within a small geographical area defined by line-of-sight of the Flight Operator (Pilot) and with a maximum flight altitude of 400 feet AGL.

sUAS operated by RD Group are small, lightweight multi-rotor battery powered aircraft. They do not carry or contain on-board any flammable fuel, explosives or weapons.

sUAS operated by RD Group will not carry on-board any crew members or passengers (Unmanned Aircraft System). No property belonging to any persons or to any group other than RD Group will be carried on-board our sUAS during flight.

Representative examples of sUAS operated by RD Group:

1) The DJI Phantom II with a maximum takeoff weight of 3 Lbs. and a maximum flight time of 25 minutes.
2) The DJI S1000 with a maximum takeoff weight of 25 Lbs. and a maximum flight time of 15 minutes.

* * *

RD Group performs commercial aerial photography and aerial inspection services. In the United States we utilize certified manned aircraft and certified manned helicopters with a pilot who holds a FAA Commercial Pilot License. A low flying aircraft or a low altitude helicopter (operating in strict compliance with existing FAA regulations) hovering and circling over a small confined area creates an inherent safety risk. This risk can be minimized, but cannot be eliminated. Manned flight involves hazards to life and property.

In the event of an accident or incident the damage caused by a small lightweight sUAS is considerably less than the damage caused by a much heavier manned aircraft. The risk of injury or death to people or persons is significantly lower with the use of a sUAS because of the small size, lightweight and slow airspeed of the sUAS.

Certified and manned aircraft are significantly more complex than a simple small Unmanned Aircraft System (sUAS). This simplicity leads to a reduced risk of mechanical failure.

Overseas RD Group is permitted to operate small, lightweight (less than 55 lbs.) Unmanned Aircraft System (sUAS) for commercial purposes (photographic and inspection services).

sUAS operated by RD Group carry no flammable fuel or combustible materials on-board. The risk of fire is eliminated. Manned aircraft are at a constant risk of in-flight fire or fire in the event of an incident or accident.

small Unmanned Aircraft System (sUAS) operated by RD Group provide an increased level of safety because of their small size, slow airspeed, light weight, operator license requirements, operator training requirements, intelligent sUAS requirements and operational parameters required.

When operated by a properly trained and qualified Flight Operator (pilot), with approved operating parameters and an intelligent flight control system the sUAS is safer than a certified aircraft due to its small size, lightweight and slow flight speed.

4) RD Group Operations

Safety is achieved through the relentless pursuit of quality training and adherence to FAA Approved Operating Procedures and FAA Regulations.

Our approach to the safe operation of small Unmanned Aircraft Systems (sUAS) is three fold: Operational Procedures - Training – Equipment.

RD Group maintains a current "Flight, Maintenance & Operations Manual (Standard Operating Procedures) which describes in detail the Standard Operating Procedures for RD Group. This "Flight, Maintenance & Operations Manual" describes in detail all operational policies and procedures for RD Group, including (but not limited to); flight crew license and currency requirements for flight (including FAA license requirements) – sUAS requirements for flight – NAS and weather requirements for flight. The proprietary RD Group "Flight, Maintenance & Operations Manual" is attached to this application for and exemption.

RD Group operates an extensive training program to ensure that all personal possess the knowledge and skills necessary to operate sUAS in a safe manner. RD Group maintains a current "Training Manual" which describes in detail the Training Procedures for RD Group. The Chief Pilot, Dispatcher, Flight Operator (Pilot) and Visual Observer (VO) duties, training requirements are described in these manuals. The proprietary RD Group "Training Manual" is attached to this application for and exemption.

* * *

RD Group utilizes a flight dispatcher to enhance safety. Before the flight crew departs for flight a RD Group "Flight Dispatch" form must be completed and signed by an authorized RD Group flight dispatcher..

This insures that:

1) The flight crew meets all FAA and RD Group flight requirements.
2) The sUAS meets all FAA and RD Group flight requirements.
3) Permission has been received to photograph the location.
4) The airspace and weather meet FAA and RD Group flight requirements.

* * *

Flight crew required to operate the sUAS will be a Flight Operator (Pilot) and a Visual Observer (VO). The Flight Operator (Pilot) will posses a current FAA private pilot license and a current FAA class III medical certificate. The Visual Observer (VO) will have received required RD Group training to qualify for Visual Observer (VO) duties..

A pilot with a FAA Private license and a pilot with a FAA Commercial license have both demonstrated a parallel level of knowledge in required aeronautical knowledge. A FAA Commercial license will demonstrate further airmanship skills to safely carry passengers and cargo for hire. A sUAS will not carry passengers or cargo for hire. Thus a pilot with a FAA Private license will provide the equivalent and required level of safety to operate a sUAS as a pilot with a FAA Commercial license.

These enhanced airmanship skills are not utilized in, the flight of a sUAS thus a FAA licensed private pilot with sUAS flight training will provide an equivalent level of safety.

Single pilot commercial flight operations are permitted under existing FAA regulations requiring a FAA Class III medical certificate. A Class III Medical certificate provides an equivalent level of safety as a FAA Class II given the level of safety required for sUAS flight and the sUAS ability to "auto hoover" and "auto return home" at the touch of a button.

* * *

Any incident or accident that inflicts serious injury or death up a person or causes property damage in excess of $25,000 will be reported by RD Group to the local FAA Flight Safety District Office (FSDO) within 72 hours of the occurrence.

5) Requirements for sUAS Flight

Flight Crew Requirements:

1) Flight Operator (Pilot)
   a) Flight Operator (Pilot) must be listed on the sUAS Operators list for RD Group
   b) Flight Operator (Pilot) must posses at a minimum:
      i) FAA issued Private Pilot License.
      ii) Must meet FAA flight currency requirements for FAA pilot license held.
      iii) Current FAA Class III medical certificate.
      iv) Flight Operator (Pilot) must have received and documented all required initial and recurrent training. Refer to RD Group Training Manual.
   c) Flight Operators (Pilot) Flight Experience
      i) Flight Operators (Pilot) must have accumulated and logged a minimum of 200 flight cycles and 25 hours of total time as sUAS pilot.
         (1) At least 10 hours of this time must be in a similar type of sUAS.
      ii) Flight Operators (Pilot) must have accumulated and logged a minimum of 5 hours of sUAS time with the make and model of sUAS to be flown and 3 takeoffs and landings within the preceding 90 days.
2) Visual Observer (VO)
   a) Visual Observer (VO) must be listed on the sUAS Operators list for RD Group
   b) Visual Observer (VO) must have received and documented all required initial and recurrent training. Refer to RD Group Training Manual.
3) Flight Dispatcher
   a) Flight Dispatcher must be listed on the sUAS Operators list for RD Group.
   b) Flight Dispatcher must have received and documented all required initial and recurrent training. Refer to RD Group Training Manual.

UAV Requirements for Flight:

1) sUAS gross weight (total including payload and power source) must not exceed 55 lbs.
2) sUAS must receive a safety inspection before each flight sequence.
3) sUAS operator must have continuously available telemetry from the UAV:
   a) Display of sUAS distance from the operator.
   b) Display of sUAS altitude from the operator.
   c) Display of sUAS remaining battery life.
4) sUAS may not be operated with less than 25% useful battery life.
5) UAV must possess the capability to return to its point of departure and land safely in the event of loss of operator RF control signal.

Document Requirements for Flight:

Due to the sUAS size and weight limitations and the fact that the sUAS does not contain an operator these documents will be with the Flight Operator (Pilot) during all flight operations.

1) Flight Operators (Pilot) must have the following manuals and documents for flight.
   a) Flight operators (pilot) must have a current VFR Sectional Chart for the airspace in which the sUAS is to be operated.
   b) RD Group "Flight, Maintenance & Operations Manual".
   c) Completed and signed "Authority to photograph form".
   d) Completed and signed "Flight Dispatch form".
   e) Operators Manual for sUAS in use.

Flight Restrictions:

1) All sUAS flights require a Visual Observer (VO).
2) sUAS Flight Operator (Pilot) or Visual Observer (VO) must maintain visual line of sight and visual contact with the sUAS at all times.
   a) Visual line of sight requires the unaided (corrective lenses and /or sunglasses excepted) contact between a pilot in command and an unmanned aircraft sufficient to maintain safe operational control of the aircraft, know its location, and be able to scan the airspace in which it is operating to see and avoid other air traffic or objects aloft or on the ground.
3) The Flight Operator (Pilot) and Visual Observer (VO) must maintain verbal communications at all times.
4) sUAS may not be flown at a ground speed exceeding 50 knots.
5) Maximum sUAS operating altitude of 400 feet above ground level.
6) Maximum sUAS flight distance of 2,000 feet from the sUAS operator.
7) Visibility must be a minimum of ½ mile.
8) Cloud ceiling must be a minimum of 500 feet.
9) sUAS may NOT be flown over any open-air congregation or gathering of people.
10) sUAS may NOT be flown at night.

National AirSpace Limitations:

sUAS flights ARE PERMITTED in all areas of the US National AirSpace system with the following limitations:

1) sUAS may NOT be flown in "Class A" Airspace.
2) sUAS may NOT be flown in "Class B" Airspace.
3) sUAS may NOT be flown beneath "Class B" Airspace where the underlying "Class B" Airspace is less than 2,000 feet AGL.
4) sUAS may NOT be flown in "Class C" Airspace.
5) sUAS may NOT be flown in "Prohibited" Airspace.
6) sUAS may NOT be flown where the FAA has issued a Temporary Flight Restriction.

6) FAA Should Grant RD Group an Exemption

Today's current methods of commercial aerial photography and commercial aerial inspection require the use of a certified manned aircraft or a certified manned helicopter and a pilot with a FAA Commercial Pilot License. A low flying aircraft or a low altitude helicopter (operating in strict compliance with existing FAA regulations) hovering and circling over a small confined area creates an inherent safety risk. It can often create a nuisance of noise pollution in the affected area as well.

RD Group is permitted by law to utilize (sUAS) in many international countries for commercial operations. However in the United States (our country of residency and citizenship) we are only permitted to fly a sUAS for hobby or for recreational purposes. This creates an economic hardship for RD Group.

Granting this requested exemption will be in the public interest because of the increased level of safety that is afforded by the use of our sUAS vs. the use of a manned aircraft or a manned helicopter – because of the economic relief that it will provide to RD Group and it's employees – because of the positive economic impact it will provide to the community – because of the reduction in the number of aircraft in the NAS – because of the reduction in the level of aircraft noise for persons on the ground.

small Unmanned Aircraft System (sUAS) operated by RD Group provide an increased level of safety because of their small size, slow airspeed, lightweight, operator license requirements, operator training requirements, intelligent sUAS requirements and operational parameters required.

As we have clearly shown; operation of sUAS by RD Group with the Flight Operator (Pilot) requirements, sUAS requirements, operational requirements and training requirements we have outlined meet or exceed existing flight safety standards for manned aircraft, will reduce airspace congestion, will airborne noise and will provide an economic benefit to American Citizens.

RD Group is requesting an exemption to current FAA regulations to permit Commercial operation of small Unmanned Aircraft System sUAS utilizing RD Group Flight and Training manuals, described Flight Crew requirements, described sUAS requirements, described Flight restrictions and described National AirSpace Limitations.

RD Group is owned and operated by Mr. David w Mansen, an American citizen with an exemplary record spanning over thirty years of aviation safety and adherence to FAA regulations. Mr. Mansen will set the standard (and assist in developing standards) for safety as the FAA begins to regulate the sUAS and UAS industries.

Due to their small size, lightweight, slow airspeed and confined geographical operational area, Commercial operation of sUAS by RD Group:

Will NOT adversely affect safety in the National Airspace System

Will NOT pose a hazard the public

Will NOT pose a threat to National Security.

Process, Procedures and Policies outlined in RD Group "Flight, Maintenance & Operations Manual" and in RD Group "Training Manual" provide sUAS operations an equivalent or greater level of safety than manned aircraft.

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Flight Dispatch

Flight Dispatch is Authorization for:

Name – Telephone – e-mail	Address

"Authority to Photograph form" is signed and attached.

Flight Crew

Flight Operator (Pilot)	Visual Observer (VO)

small Unmanned Aircraft System (sUAS)

sUAS Manufacturer	sUAS Model #	sUAS Serial #

I certify that:

1) Flight Crew listed MEET all FAA and RD Group flight requirements including:
   a. FAA License requirements.
   b. FAA flight currency requirements.
   c. Posses current FAA Class III Medical Certificate.
   d. Have satisfactorily completed all required initial and recurrent training requirements.
   e. Flight Crew listed is approved for flight at this location.
2) sUAS listed MEET all RD Group requirements.
   a. sUAS is approved for flight at this location.
3) Airspace at the above listed location MEETS FAA and RD Group sUAS flight requirements.
4) Current weather at the above listed location MEET RD Group sUAS flight requirements.
5) Flight Crew is authorized to dispatch with sUAS for flight at this location.

Signature	Date
Printed Name	Time

I am authorized by RD Group for flight dispatch.

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Authority to Photograph

Permission is hereby granted to *RD Group* to photograph (Still Images, Video or both) the property listed below. All aerial photography will be done utilizing either Manned Aircraft or small Unmanned Aircraft Systems (sUAS) in accordance with FAA Regulations. Access to the property grounds, if necessary is authorized.

All photographs and video will be customer's property upon receipt of payment. *RD Group* reserves the right to use any photograph or video for promotional purposes.

All photographs and video will be delivered to customer in a digital format.

Permission Given By: Name – Address – Telephone – e-mail	Address to be Photographed:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Date: _____

Signature: _____

Printed Name: _____

I am authorized to give permission to access and photograph this property.