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

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

September 1, 2015

Exemption No. 12697
Regulatory Docket No. FAA−2015−2417

Mr. Django Greenblatt-Seay
5521 North 52nd Street
Omaha, NE 68104

Dear Mr. Greenblatt-Seay:

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 posted to the public docket June 22 and August 14, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. You requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, cinematography, inspections, precision agriculture, closed-set filming, search and rescue operations, and UAS training[1].

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.

[1] The petitioner also requested authority to conduct UAS training. At this time, the FAA is unable to authorize UAS operations for training until a further assessment is completed. When the FAA completes its review, we will proceed accordingly and no further action will be required by the petitioner. However, the petitioner is permitted to train its own pilot in commands and visual observers in accordance with condition no. 14 and the other conditions and limitations in this exemption.

Airworthiness Certification

The UAS proposed by the petitioner are the DJI Phantom 2, DJI Phantom 3, DJI Inspire 1, DJI Spreading Wings S800, DJI Spreading Wings S900, DJI Spreading Wings S1000, DJI Matrice 100, Cinestar 8, Altavian Nova F6500, Blade 350 QX3, AgEagle, 3D Robotics X8, 3D Robotics Iris, 3D Robotics Solo, SenseFly eBee, Yuneec Q500 Typhoon, DraganFlayer X4-ES, Trimble UX5, and Microdrones MD4.

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[2] and closed set motion picture and filming. 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.

[2] 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.

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, Mr. Django Greenblatt-Seay 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 and closed set motion picture and filming. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Mr. Django Greenblatt-Seay 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 3, DJI Inspire 1, DJI Spreading Wings S800, DJI Spreading Wings S900, DJI Spreading Wings S1000, DJI Matrice 100, Cinestar 8, Altavian Nova F6500, Blade 350 QX3, AgEagle, 3D Robotics X8, 3D Robotics Iris, 3D Robotics Solo, SenseFly eBee, Yuneec Q500 Typhoon, DraganFlayer X4-ES, Trimble UX5, and Microdrones MD4 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 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

Dear Sir or Madam:

I am writing pursuant to the FAA Modernization and Reform Act of 2012 (the Reform Act) and the procedures contained in 14 C.F.R. 11, to request that I, an owner and operator of small unmanned aircraft, be exempted under Section 333, so I may operate my small unmanned aircraft commercially in airspace regulated by the Federal Aviation Administration (FAA).

I am requesting this exemption because - (1) existing regulations will severely hinder and burden me - (2) I can provide and execute a level of competence and safety that is, at the very least, equal to (or greater than in many cases) to those provided by existing guidelines, and (3) the request is in the public interest and local benefit.

I am a career corporate communicator and independent/freelance videographer. I have a day job at Union Pacific Railroad as the company's Communication Manager of Video, where I facilitate a process that makes sure company videos follow safety rules and regulations. In my free time, I have made more than 130 music videos along with dozens of other video projects. Many of these projects are commercial projects.

I have been a sUAS hobbyist for about two years, with

more than 100 consecutive, safe flights with my DJI Inspire 1 in the last year alone, with more than 100 hours of flight time. I conduct an extensive pre-flight check before every flight. I conduct a safety briefing prior to every flight, indicating the flight plan and making sure everyone is aware of potential hazards in our surroundings. The safety briefing is also an opportunity to designate a person to call 911 in the event of an emergency, and do determine whether anyone on site is CPR certified.

Each flight is flown line of sight with a pilot (myself), and a spotter. Most flights include a dedicated camera operator as well. Maintaining line of sight is accomplished by putting great effort into planning each camera move/pass before initiating it.

I am formally requesting permission to fly my DJI Inspire 1 commercially in the United States to capture aerial cinematography for clients who would otherwise have to contract a manned aerial vehicle, which would put human life at a greater risk. Much of the commercial cinematography I plan to conduct will be at altitudes and in environments unsafe for a manned vehicle. This includes low-altitude passes over landscapes such as open farm land, or over wooded areas.

My exemption request would permit me operation of my

DJI Inspire 1 in FAA approved airspace at a maximum altitude of 300 feet and no greater than 50 miles per hour. I will fly only in FAA approved areas, which include appropriate distance from airports and other no-fly-zone areas.

I will conduct my operations in compliance with the protocols established by the FAA. For the reasons stated in this petition, I respectfully request the grant of an exemption allowing me to operate a DJI Inspire 1 within the national airspace system.

Details about my pre-flight checklist and specifications about my DJI Inspire 1 are listed below.

Thank you,

Django Greenblatt-Seay
5521 N 52nd St.
Omaha, NE 68104
402-201-8437

Pre-Flight Checklist

1. Remote controller, aircraft battery, and mobile device are fully charged.

2. Propellers are mounted correctly and firmly.

3. Micro-SD card has been inserted if necessary.

4. Calibrate gimbal.

5. Motors can start and are functioning as normal.

6. DJI Pilot app connected to the aircraft.

7. Calibrate IMU.

8. Calibrate compass.

9. Identify any geographic or human obstacles that could challenge a safe flight.

10. Conduct safety briefing.

DJI Inspire 1 Details
Weight (Battery Included): 2,935 g
Max Ascent Speed: 5 m/s
Max Descent Speed: 4 m/s
Max Speed: 22 m/s
Max Flight Time: Approximately 18 minutes
Motor Model: DJI 3510
Dimensions: 438x451x301 mm
Operating Frequency: 5.725-5.825 GHz or 2.400-2.483 GHz

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
DOCKET MANAGEMENT SYSTEM
1200 NEW JERSEY AVE., SE
WASHINGTON, DC 20590
Attention:
Brenda Robeson Program Analyst,
Airmen and Airspace Rules Division

IN THE MATTER OF THE PETITION FOR EXEMPTION AND THE FAA'S LETTER DATED JUNE 25, 2015 REQUESTING ADDITIONAL INFORMATION FROM:

Django Greenblatt-Seay

DOCKET # FAA-2015- 2417

FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF THE FAA REFORM ACT AND PART 11 OF THE FEDERAL AVIATION REGULATIONS FROM TITLE 14 OF THE CODE OF FEDERAL REGULATIONS

SECTIONS C.F.R. §§ 61.113 (a) & (b); 91.7(a); 91.119 (c); 91.121; 91.151(a); 91.405 (a); 91.407(a) (1); 91.409 (a) (2); 91.417 (a) & (b).

CONCERNING COMMERCIAL OPERATION OF UNMANNED AIRCRAFT SYSTEMS PURSUANT TO SECTION 333 OF THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)

Submitted on July 23, 2015

Django Greenblatt-Seay
5521 N 52nd St.
Omaha, NE 68104

Django Greenblatt-Seay Consultant
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Info@GowdyBrothers.com

Table of Contents

GLOSSARY OF ABBREVIATIONS

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

INTRODUCTION AND INTERESTS OF THE PETITIONER

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 C.F.R. Part 11, Django Greenblatt-Seay, ("Django Greenblatt-Seay") Operator of Small Unmanned Aircraft Systems ("sUASs") equipped to offer on-demand commercial UAS operations for a host of industries and applications and to perform the purposes listed below, hereby applies for an exemption from the listed Federal Aviation Regulations ("FARs") to allow commercial operation of its sUAV's/UAS, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA in an exemption granted under either Section 333 or Section 49 U.S.C. §44701(f)

As described more fully below, the requested exemption would permit the operation of a UAS under controlled conditions in airspace that is 1) limited; 2) predetermined; and 3) would provide safety enhancements in the fields in which it will operate, which now depend upon conventional aircraft or humans climbing high on dangerous structures, walking in insect laden swamps, and working adjacent to treacherous infrastructure. 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.[1]

Executive Summary

Expeditious Summary Grant Approval Request

The petitioner requests the agency issue a summary grant process for this application. Petitioner has provided in a confidential document attachment labeled as petitioner proprietary information, specific exemption numbers whereby the FAA has already granted a previous exemption similar or identical to each and every request, herein.

For the FAA's benefit, Petitioner's Consultant, Gowdy Brothers Aerospace, LLC, has researched, categorized and arranged all 631 exemptions granted as of June 23,

[1] Django Greenblatt-Seay relies upon the following exemptions where specific reference to an exemption is not provided: Exemptions 11062 thru 11067, 11080, 11109 through 11112, 11114, 11213, 11062 and as recent as 11857.

2015 into a usable searchable database, based upon the following criteria: date submitted, date grant issued, time to petition grant, petitioner, petitioner's state, exemption number, sUAV equipment type, grant purpose (mission/operation), along with other supporting data.

Petitioner has identified four previous approved exemptions for each of the Petitioners FAA submission requests:

- Commercial (mission/operation) purposes;
- Type of sUAV's (UAS);
- Title 14 Exemptions (exemption pattern referenced in appendix A)[2]

Description of Type, Make and Models of sUAV/UAS Requested:

The petitioner is seeking an exemption to commercially operate sUAV's makes and modes as follows:

DJI - Phantom 2, DJI - Phantom 3, DJI - Inspire 1, DJI – Spreading Wings S800, DJI – Spreading Wings S900, DJI – Spreading Wings S1000, DJI – Matrics 100, Cinestar 8 Octo, Altavian Nova F6500, Blade 350 QX3, AgEagle, 3DRobotics X8, 3DRobotics Iris, 3DRobotics Solo, SenseFly eBee, Yuneec Q500 Typhon, DraganFlyer X4-ES, Trimble UX5, Microdrones MD4

Each separately weighs 55 lbs. or less, with imaging payload and applicable equipment.

Equipment operation manuals for each sUAV are included for your reference and are considered confidential information for each respective company's UAS and are affixed separately in these documents labeled Appendix.

Commercial (Mission, Operation) Purpose:

This exemption request, once granted would allow the petitioner to operate a small unmanned aerial vehicle (sUAV), unmanned aircraft system (UAS) to conduct bridge Inspections, flare stack inspection, utility-power generation system inspections and patrolling, aerial inspection, photography and videography of residential and commercial real estate, weddings, aerial inspection, photography and videography

[2] Petitioner submits the Appendix and Manuals marked "CONFIDENTIAL," as they contain proprietary confidential business information that is not released to the public and is protected under the Freedom of Information Act 5 USC §552 et. seq. 5 Reform Act Section 333 (b).

of utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers, pipeline inspection and patrolling, filmmaking, cinematography, and videography, precision agriculture with on board sensors, wildlife and forestry monitoring and mosquito and insect control, aerial surveying, construction site inspection and monitoring, public entity support operations, Aerial imaging for safety, monitoring and comparing work efforts and completion percentages, and security of controlled environment of various sites, aerial video and live video feed to assist with search and rescue operations under the authority and support of local authority officials, aerial video and photography for public and private use including television, public events, and cinematography live feed and live newsgathering, training to persons individually or belonging to both private and public organizations to increase awareness and improve safety for current and future UAS operations within the NAS, special events: including high schools. colleges, professional sports, open air events and fairs, research, risk management and assessment, motion picture production[3], surface mining, closed set filming[4], disaster and catastrophe events.

Regulations from which the Exemption Relief is requested:

14 C.F.R. § 61.113 (a) & (b)
14 C.F.R. § 61.133(a)
14 C.F.R. § 91.7(a)
14 C.F. R.§ 91.119
14 C.F.R. § 91.121
14 C.F.R. § 91.151 (a)
14 C.F.R. § 91.405 (a)
14 C.F.R. § 407 (a) (1)
14 C.F.R. § 409 (a) (2)
14 C.F.R. § 417 (a) & (b)

See Appendix E

[3] Motion Picture and Television Flight Operations Manual is herein attached as Appendix G.
[4] Motion Picture and Television Flight Operations Manual for closed set filming is herein attached as Appendix G.

The name and address of the Petitioner:

Django Greenblatt-Seay
5521 N 52nd St.
Omaha, NE 68104

Please direct any question or comment regarding this petition to Petitioners Consultant: Gowdy Brothers Aerospace, LLC.
8170 Old Carriage Court N., Suite #200
Shakopee, MN 55379
www.GowdyBrothersAerospace.com
Info@GowdyBrothers.com

Background

The Petitioner, Django Greenblatt-Seay is a highly accomplished, capable, experienced and trusted professional.

Django Greenblatt-Seay is a career corporate communicator and independent/freelance videographer. Django Greenblatt-Seay has a day job at a major Railroad Company as the company's Communication Manager of Video, where he facilitate a process that makes sure company videos follow safety rules and regulations. In his free time, he has made more than 130 music videos along with dozens of other video projects. Many of these projects are commercial projects.

Commitment to Safety

As part of its commitment to safety and innovation, Django Greenblatt-Seay is asking for this exemption in part, to reduce the risk of injury to its employees and contractors who participate in the proposed activities the petitioner requests, including but not limited to damage to agriculture, natural habitat, buildings and other structures within the United States.

Django Greenblatt-Seay has been a sUAS hobbyist for about two years, with more than 100 consecutive, safe flights with his DJI Inspire 1 in the last year alone, with more than 100 hours of flight time. He conducts an extensive pre-flight check before every flight. He conducts a safety briefing prior to every flight, indicating the flight plan and making sure everyone is aware of potential hazards in our surroundings. The safety briefing is also an opportunity to designate a person to call 911 in the event of an emergency, and do determine whether anyone on site is CPR certified.

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Expertise & Experience

Django Greenblatt-Seay and Django Greenblatt-Seay due to his professional experience as a trusted pilot as is extremely qualified and is considered an up and coming subject matter expert in the {Region} area for UAS of all types, models and makes.

The Exemption Request

Django Greenblatt-Seay proposes the use of the sUAV's will be for capture of high resolution imagery and video of residential or commercial applications and purposes to a level of quality that allows the Petitioner to use the imagery to identify, record, memorialize events and objects according to the purposes noted.

The imagery and video will be used to identify the condition of landscapes, agriculture, events, disasters and infrastructure to conduct bridge inspections, flare stack inspection, utility-power generation system inspections and patrolling, aerial inspection, photography and videography of residential and commercial real estate, weddings, aerial inspection, photography and videography of utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers, pipeline inspection and patrolling, filmmaking, cinematography, and videography, precision agriculture with on board sensors, wildlife and forestry monitoring and mosquito and insect control, aerial surveying, construction site inspection and monitoring, public entity support operations, aerial imaging for safety, monitoring and comparing work efforts and completion percentages, and security of controlled environment of various sites, aerial video and live video feed to assist with search and rescue operations under the authority and support of local authority officials, aerial video and photography for public and private use including television, public events, and cinematography live feed and live newsgathering, training to persons individually or belonging to both private and public organizations to increase awareness and improve safety for current and future UAS operations within the NAS, special events: including high schools, colleges, professional sports, open air events and fairs research, risk management and assessment, motion picture production, surface mining, closed set filming, disaster and catastrophe events.

The UAS will be operated by a Django Greenblatt-Seay and or contracting operators on occasion to capture high-resolution imagery/video of large structures (wide and tall) such as warehouses, high rise buildings, bridges, and construction sites, as well as "birds eye" views of fire and explosion sites. Given the small size of the sUAV's involved, no more than 55 lbs., majority of the speed of operation be between 5-15 mph and the restricted environment within which they will operate, the Petitioner falls squarely within that zone of safety (an equivalent level of safety) in which Congress envisioned that the FAA must, by exemption, allow commercial operations of UASs to commence immediately.

This exemption application is submitted to fulfill Congress' express goal in passing Sections 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 UASs 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 UAS' size, weight, speed, and operational capability;
- Operation of the UAS in close proximity to airports and populated areas; and
- Operation of the UAS within visual line of sight of the Operator.

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).[5]

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: The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any of sections 44702-44716 of this title if the Administrator finds the exemption is 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) This authority to grant exemptions reaches such issues as authorization of commercial operation of aircraft without an FAA issued pilot's license.

Django Greenblatt-Seay in filing this application is requesting that the FAA combine the grant of the Section 333 exemption with a standard Certificate of Operation (COA) that will allow commercial operations of its Django Greenblatt-Seay' sUAV without the necessity of filing for a COA for each flight, unless such flight is to be conducted in an area not approved in the exemption. Compliance with the conditions agreed to herein and that may be imposed by the FAA, as set forth in prior Section 333 exemptions, provide the separation needed from other aircraft.

In addition, given that all operations will be conducted below 400 AGL feet and no closer than 5 nautical miles of the geographic center of an airport as denoted on a current FAA published aeronautical chart, unless a letter of agreement with that airport's management is obtained, Django Greenblatt-Seay requests that operations over congested or densely populated areas be allowed. The new sUAV's do have GPS geo-fencing, it will operate at a very low altitude, within confined areas, at low speed and weighs no more than 55 lbs.. Such operations will only be under-taken with the approval of the land or home owner, as set forth herein, and will comply with the requirements that operations be no closer than 500 feet to the adjacent

[5] Applicant interprets this provision to place a duty on the Administrator to not only process applications for exemptions under section 333, but for the Administrator to craft conditions for the safe operation of the UAS, if it should be determined that the conditions set forth herein do not fulfill the statutory requirements for approval.

building unless the land owner has provided permission, and the Operator has made a safety assessment of the risk from such operations.

Operator Requirements

Given the sUAV proposed by Django Greenblatt-Seay, Operators should not be required to hold a private pilot license. Django Greenblatt-Seay believes that 1) the operator, instead of understanding how to operate a passenger carrying aircraft, should have knowledge and experience that enables the safe operation of a small, remotely piloted sUAV should understand airspace restrictions and know how to ensure separation from other aircraft as well as non-participants and property; 2) the sUAV has built-in technical capabilities that limit the potential for unsafe operation and 3) there are other security screening mechanisms already in existence that Django Greenblatt-Seay will utilize to ensure the operators are acting consistently with national security interests.

Given the sUAV safety features outlined below, Django Greenblatt-Seay proposes that its operations under this Exemption request should not be required to hold a commercial or private pilot certification. Instead, Operators should be required to: have successfully completed, at a minimum, FAA private pilot ground instruction and passed the FAA Private Pilot written examination or FAA-recognized equivalents; have completed Django Greenblatt-Seay' training program for operation of the UAS.

Django Greenblatt-Seay notes that 1) the FAA has found that safety factors permitted operation of sUAV's by Operators with these qualifications in the case of operations pursuant to public COAs when the mandatory operating conditions specified above were present; and 2) that the Notice of Proposed Rulemaking entitled Operation and Certification of Small Unmanned Aircraft Systems, 80 F.R. 9544 (February 23, 2015) ("NPRM"), does not require the operator to hold a private pilot license or a third class medical.

Advanced sUAV's has a navigation and control system and auto-pilot that allows it to execute very accurate pre-programed flights. Flights are pre-programmed with GPS waypoint to establish perimeters beyond which the aircraft will not operate. Flights under auto-pilot are not directed by positive manual input, but through pre-programmed flight parameters that are executed by the auto-pilot. In the case of unplanned events, the Operator inputs preprogrammed evasive maneuvers from the control unit, and the autopilot executes those maneuvers. Pre-programmed Operator interventions include: initiation of holding at present position; suspension of mission; fly back to launch point; abort mission and land immediately; and emergency power cut off and land (flight termination system). Additional automated safety functions and safety enhancing features of the Advanced sUAV's may include the following:

1) Auto-pilot detection of lost GPS or of insufficient satellites initiates an immediate landing,
2) Low power on the aircraft triggers escalating alarms at GCS at 35% and 10% levels. Low power below 10% triggers an immediate landing,
3) If the auto-pilot detects a lost-link to the ground controller, the UAS will hold position at its current location for 5 seconds and if the signal is not restored, execute a return to home and land,
4) Redundant "kill switches" that enable completely shutting the aircraft down in flight in the event of a loss of control or un-commanded deviation from the flight path,
5) The aircraft, weighs less than 55 lbs., fully loaded,
6) The motors are driven by pulse width modulated signals, not analog signals,
7) The aircraft will operate for the Purposes at no more than 30 mph (while imaging) nor above 200 feet above the structure (imaging altitude) or a maximum of 400 feet AGL.

See Federal Aviation Administration, Notice N-8900.227, Unmanned Aircraft Systems (UAS) Operational Approval, at 20-21 (July 30, 2013); As the FAA has determined in Exemptions 11062 thru 11067,11080 and 11110 (the "Exemptions"), in comparing the requirements for private pilot knowledge and the knowledge required for a commercial pilot, that knowledge associated with a private pilot license, and therefore private pilot ground school, was sufficient to allow private pilots to operate sUAV's under those exemptions.

Based upon that analysis, Django Greenblatt-Seay believes successful completion of FAA private pilot ground school is a suitable predicate to operating the sUAV under this exemption. Django Greenblatt-Seay proposes that the Operator accumulate required sUAV flight training hours through the operation of sUAV's rather than flight hours in conventional aircraft. Those hours are more relevant to the operations proposed herein than hours gained in obtaining a private pilot's certificate in conventional or rotor aircraft. Those aircraft are orders of magnitude heavier than the sUAS and carry not only the pilot himself, but also passengers and fuel, none of which is carried in the sUAS. These conventional aircraft fly over all sorts of airspace without the permission or knowledge of the landowner.

A handheld radio controller controls the sUAV and the vehicle is operated within the line of sight. The requirements of Part 61.127 (commercial flight proficiency) and §61.107 (private flight proficiency), to the extent they are relevant to UAS operations, can be taught in the training proposed herein. As a review of the requirements of part 61.127 and 107 demonstrate, the issues presented as they relate to a 55 pound aircraft, operating at less than 30 mph during filming operations are those taught in ground school and in flight training with the particular UAS and not gained from accumulating flight hours in a fixed wing or rotorcraft gas or jet A powered aircraft completing cross country flights and take offs and landings at controlled and uncontrolled airports.

As to national security review of pilots, each of Django Greenblatt-Seay' pilots/operators will obtain internally provided certified training (Ground and Practical) from Django Greenblatt-Seay to operate the sUAV. This review and certification could reasonably vet the Operators against any known terrorist or no fly listings that are relevant and publically available.

Django Greenblatt-Seay additionally asks that the exemption be issued without the requirement for a visual observer. As set forth herein, an equivalent level of safety is provided by the size, speed and control capabilities of the aircraft, as well as the operational procedures that will be applicable to all flight hereunder. These obviate the need for the visual observer.

The Operator will be operating the aircraft, always within line of sight. He or she will walk and follow the aircraft around the inspection area so that while it is flying its pre-programed and at times, manual flight path, the UAS will always be directly in his or her line of sight. The Operator will not be distracted by viewing the pictures taken during the flight. Rather, once the sUAV is launched, the Operator's only duty will be to watch the flight of the UAS over the structure and intervene to address flight path deviations or other issues that arise during the flight. The functions that an observer performs where the aircraft is flown at long distances from the launch area will not be necessary as the Operator will always have the aircraft in his or her direct sight. The observer also will not be necessary because the Operator will conduct a pre-flight inspection of the area, will and if needed, cordon off the area and will perform frequent visual scans of the area while the vehicle is operating.

Django Greenblatt-Seay again notes that the NPRM does not require the use of a visual observer. 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 battery powered sUAV's for these functions instead of turbine or gas power aircraft/rotorcraft and operations with pilots having at least a private pilot license, the grant of the requested exemptions is in the public interest. [6]

[6] Should the FAA determine that it cannot grant such an exemption for operations without a FAA licensed private pilot, despite the showing made herein, under the statutory authority the FAA already has, Django Greenblatt-Seay will operate its aircraft with pilots holding at least a private pilot certificate issued by the FAA. In that event, Django Greenblatt-Seay requests that the exemption be granted with conditions similar to those contained in numbered paragraphs 14-15 in Exemption 11136

Aircraft and Equivalent Level of Safety

The Petitioner proposes that the exemption requested herein apply to civil 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 because the proposed operations represent a safety enhancement to the operations conducted with conventional aircraft or with humans climbing up and around structures. These conditions are drawn from Exemptions 11136, 11138, 11172, 11174 and 11177, 11062, 11109, 11112, and 11213 and as recent as 11857.

These limitations and conditions to which Django Greenblatt-Seay (referred to as "Operator") agrees to be bound when conducting commercial operations under an FAA issued exemption include:

1) Operations authorized by this grant of exemption are limited to the aircraft described in the Operator's manual, which is a multi-rotor weighing up to 55 pounds: Proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2) The UA may not be flown at an indicated airspeed exceeding 30 mph (10 mph during inspections).

3) The UA must be operated at an altitude of no more than 400 feet above ground level (AGL), as indicated by the procedures specified in the Operator's manual. All altitudes reported to ATC must be in feet AGL.

4) The UA must be operated within visual line of sight (VLOS) of the Aircraft Operator at all times. This requires the Aircraft Operator to be able to use human vision unaided by any device other than corrective lenses..

5) The Exemption Holder's Manuals must be amended to include all conditions and limitations required by the FAA. The Manuals must be maintained 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 Exemption Holder's Operator's manual, the conditions and limitations in the exemption take precedence and must be followed. Otherwise, the Aircraft Operator must follow the procedures as outlined in its Aircraft's manual. The Exemption Holder may update or revise its Manuals. It is the Exemption Holder's responsibility to track such revisions and present updated and revised documents to the Administrator upon

request. The Exemption Holder must also present updated and revised documents if it petitions for an extension or amendment of this exemption. If the Exemption Holder determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the Exemption Holder must petition for amendment to its exemption.

6) Prior to each flight, the Aircraft Operator must inspect the UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed, and the UAS is found to be in a condition for safe flight. The Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

7) Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight in accordance with the Exemption holder's Manuals. The Aircraft Operator who conducts the functional test flight must make an entry in the UAS aircraft records of the flight. The requirements and procedures for a functional test flight and aircraft record entry must be added to the Exemption Holder's Operator's manual.

8) The Exemption Holder must follow the manufacturer's UAS aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements, with particular attention to flight critical components that may not be addressed in the manufacturer's manuals.

9) The Exemption Holder must carry out its maintenance, inspections, and record keeping requirements in accordance with the Operator's Manuals. Maintenance, inspection, and alterations must be noted in the aircraft logbook, including total flight hours, description of work accomplished, and the signature of the authorized technician returning the UAS to service.

10) The authorized technicians must receive and document training referenced in the Exemption Holder's Manuals.

11) Each UAS operated under this exemption must comply with all manufacturer System and Safety Bulletins.

12) The Exemption Holder's maintenance personnel must make a record entry in the UAS logbook or equivalent document of the

corrective action taken against discrepancies discovered between inspections.

13) Prior to commencing operations, the Aircraft Operator shall have logged at least 25 hours of total time as a UA rotorcraft pilot and at least ten hours logged as a UA pilot with a similar UA type and 5 hours in the make and model.

14) If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property and land or be recovered in accordance with the Exemption Holder's Manuals.

15) The Aircraft Operator must abort the flight in the event of unpredicted obstacles or emergencies, including unauthorized people entering the flight area, in accordance with the Exemption Holder's Manuals.

16) The Aircraft Operator is prohibited from beginning a UAS flight unless (considering wind and forecast weather conditions) there is enough power to fly to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 10 minutes.

17) All aircraft operated in accordance with the 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.

18) Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

19) The documents required under 14 CFR 91.9 and 91.203 must be available to the Operator 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.

20) The UA must remain clear and yield the right of way to all other manned operations and activities at all times (including, but not limited to, ultra-light vehicles, parachute activities, parasailing activities, hang gliders, etc.).

21) The UA may not be operated by the Aircraft Operator from any moving device or vehicle.

22) UAS operations may not be conducted during night, as defined in 14 CFR 1.1.

23) All operations must be conducted under visual meteorological conditions (VMC). 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 Operator.

24) During operations the UA may not operate within 5 nautical miles of the geographic center of an airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM, if as required by the Operator's COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

25) The UA may not be operated over congested or densely populated areas unless the conditions set for in #26 are satisfied. These populated areas include but are not limited to the yellow areas depicted on World Aeronautical Charts (WAC), Sectional Aeronautical Charts (Sectionals), or Terminal Area Charts (TAC). However, aeronautical charts may not reflect pertinent local information. Ultimately, it is the Operator's responsibility to maintain the minimum safe altitudes required by § 91.119 (d) (1).

26) 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 debris in the event of an accident. The Aircraft Operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 30 feet of the UA, flight operations must cease immediately and/or;

    b. The aircraft is operated near vessels, vehicles or structures where the land owner/controller has granted permission and/or the Aircraft Operator has made a safety assessment of the risk of operating closer to those objects and;

c. Operations near the Aircraft Operator do not present an undue hazard to the Operator per § 91.119(a).

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

Specific Uses Public Benefits

Django Greenblatt-Seay proposes use of its sUAV provided equivalent or augmented levels of safety for each of the uses proposed herein:

The present systems of photography and videography and mapping of inspecting the roofs, agriculture land, buildings and large structures site surveys, wild life monitoring, mosquito and insect control are now conducted by either humans wading through swamps, climbing on the roofs and structures that are steep, tall, slippery, weakened or otherwise hazardous or by the use of conventional aircraft.

The current procedures can result in significant injuries to the people who must climb on the roofs or require the use of aircraft that are orders of magnitude greater in size than the sUAV. Either method, manual inspection or large conventional aircraft, results in increased risk of injury due to personnel falling off roofs or ladders, carrying heavy ladders and dealing with confined and dangerous spaces, or increased risk from low altitude flyovers with helicopters or fixed wing aircraft inspecting buildings after damage from storms or other disasters, such as earthquakes or fires. Such flights are, of course, significantly more expensive than those undertaken with a sUAV.

The present system exposes those not only in the immediate area of inspection, but those who are along the path of flight associated with the arrival and departure of the conventional aircraft at the inspection site because the aircraft must be flown to and from the site. By contrast, the sUAV is carried to the site and transits no other property. Conventional aircraft carry flammable fuels that are not carried by the UAS and emit pollutants associated with internal combustion engines. The sUAV's proposed herein are battery powered and have no emissions.

Equivalent Level of Safety

14 C.F.R. § 61.113(a) & (b);: Private Pilot Privileges and Limitations; Pilot in Command;

Section 61.113(a) & (b) limit private pilots to non-commercial operations. Unlike a conventional aircraft that carries a pilot, passengers, and cargo, the Django Greenblatt-Seay' sUAV is remotely controlled with no passengers or property of others on board. Section 61.133(a) requires an individual with a commercial pilot's license to be pilot in command of an aircraft for compensation or hire.

Django Greenblatt-Seay respectfully proposes that Operator requirements should take into account the characteristics of the particular UAS. Django Greenblatt-Seay' sUAV has a high degree of pre-programmed control and various built-in technical capabilities that strictly limit the potential for operation outside of the operating conditions set forth in the exemption application. The Django Greenblatt-Seay' sUAV has navigation and control system comprised of a Ground Control Station (GCS) and auto-pilot system that can be pre-programmed to set operational boundaries. All flights are pre-programmed with precision GPS guidance.. In the case of unplanned events, the Operator may input pre-programmed evasive maneuvers from the control unit, and the onboard autopilot executes those maneuvers. Pre-programmed Operator interventions include initiation of holding at present position; suspension of mission; fly back to launch point; abort mission and land immediately; and emergency power cut off and land (Flight Termination System).

Additional automated safety functions and safety enhancing features of the Django Greenblatt-Seay' sUAV's may include the following:

1.1. Auto-pilot detection of lost GPS or of insufficient satellites initiates an immediate landing.
1.2. Low power on the aircraft triggers escalating alarms at GCS at 35% and 10% levels. Low power below 10% triggers an immediate landing.
1.3. If the auto-pilot detects a lost-link to the ground controller, the UAS will hold position at its current location for 5 seconds and if the signal is not restored, execute a return to home and land.
1.4. Redundant "kill switches" that enable completely shutting the aircraft down in flight in the event of a loss of control or un-commanded deviation from the flight path.
1.5. The aircraft, weighs less than 55 lbs., fully loaded.
1.6. The motors are driven by pulse width modulated signals, not analog signals.
1.7. The aircraft will operate for the Purposes at no more than 30 mph (while imaging) nor above 200 feet above the structure (imaging altitude) or a maximum of 400 AGL.

Given these safety features, Django Greenblatt-Seay proposes that Operators of the Django Greenblatt-Seay' sUAV should not be required to hold a commercial or private pilot certification.

Instead, Operators should be required to: have successfully completed, at a minimum, FAA private pilot ground instruction and passed the FAA Private Pilot written examination or FAA-recognized equivalents; have completed the manufacturer's or Django Greenblatt-Seay' training program for operation of the UAS.

Django Greenblatt-Seay notes that the FAA has found that safety factors permitted operation of UASs by Operators with these qualifications in the case of operations pursuant to public COAs where the mandatory operating conditions specified above were present. See, Federal Aviation Administration, Notice N-8900.227, Unmanned Aircraft Systems (UAS) Operational Approval, at 20-21 (July 30, 2013). Likewise, Django Greenblatt-Seay notes that the NPRM does not require that the Operator hold a private pilot license issued by the FAA.

Given these conditions and restrictions, an equivalent level of safety will be provided by allowing operation of the Django Greenblatt-Seay' sUAV without a private pilot's certificate or a commercial pilot's certificate, under the conditions set forth herein.

The risks associated with the operation of the Django Greenblatt-Seay' sUAV (given its size, speed, operational capabilities, and lack of combustible fuel) are so diminished from the level of risk associated with private pilot operations or commercial operations contemplated by Part 61 with conventional aircraft (fixed wing or rotorcraft), that allowing operations of the UAS as set forth above meets or exceeds the present level of safety provided under 14 C.F.R. § 61.113(a) & (b) and does not rise to the level of requiring a commercial pilot to operate the aircraft under § 61.133(a).

14 C.F.R. § 91.7(a): Civil aircraft airworthiness.

This regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. Should the exemption be granted allowing commercial operation of the UAS without an airworthiness certificate, no standard will exist for airworthiness of the UA. Given the size of the aircraft and the requirements that the Operator has agreed to as it relates to airworthiness, as contained in the manual, an equivalent level of safety will be achieved by insuring compliance with the manuals prior to each flight. The FAA has granted exemptions to conduct similar operations in Exemptions 11062 through 11067, 11080 and 11110.

14 C.F.R. §91.119: 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 a sUAS that is a helicopter and the exemption requests authority to operate at altitudes up to 400 AGL, an exemption may be needed to allow such operations.

The equivalent level of safety will be achieved given the size, weight, and speed of the UAS as well as the location where it is operated. No flight will be taken without the permission of the property owner, facility owner, and/or local officials. Because of the advance notice to the property owner and participants, all affected individuals will be aware of the planned flight operations as set forth in the Manuals. Compared to flight operations with aircraft or rotorcraft weighing far more than the maximum 55 lbs. and the lack of flammable fuel, any risk associated with these operations is far less than those presently presented by conventional aircraft operating at or below 500 AGL in the aerial photography industry. In addition, the low-altitude operations of the sUAS will ensure separation between these small-UAS operations and the operations of conventional aircraft that must comply with Section 91.119. The FAA has granted exemptions to conduct similar operations in Exemptions 11062 through 11067, 11080 and 11110.

14 C.F.R. §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 Django Greenblatt-Seay' sUAV, in manual or emergency mode, will not have a barometric altimeter display, but instead a GPS altitude display, an exemption will be needed. The Operator, pursuant to the procedures set forth in the Manuals as indicated before flight, will achieve an equivalent level of safety. The FAA has granted exemptions to conduct similar operations in Exemptions 11062 through 11067, 11080 and 11110.

14 C.F.R. § 91.151(a): 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 battery powering the sUAS provides approximately 40 minutes of powered flight. To meet the 30-minute reserve requirement in 14 CFR §91.151, sUAS flights would be limited to approximately 10 minutes in length. Given the limitations on the UAS' proposed flight area and the location of its proposed operations within a predetermined area, a longer time frame for flight is reasonable.

Petitioner believes that an exemption from 14 CFR §91.151(a) falls within the scope of prior exemptions. See Exemption 10673 (allowing Lockheed Martin Corporation to operate without compliance with FAR 91.151 (a)). Operating the small UAS, in a tightly controlled area where only people and property owners or official representatives who have signed waivers will be allowed, 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.

Petitioner believes that an equivalent level of safety can be achieved by limiting flights to 30 minutes or 25% of remaining battery power whichever happens first. This restriction would be more than adequate to return the sUAS to its planned landing zone from anywhere in its limited operating area. Similar exemptions have been granted to other operations, including Exemptions 2689F, 5745, 10673, 10808 and Exemptions 11062, through11067, 11080 and 11110.

14 C.F.R. §91.405 (a); 91.407 (a) (1); 91.409(a) (2); 91.417(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 Petitioner. Maintenance will be accomplished by the Operator or manufacturer pursuant to the flight manual and operating handbook as referenced in the Manuals attached as confidential Exhibits 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 defined areas for limited periods of time. If mechanical issues arise, the UAS can land immediately and will be operating from no higher than 400 feet AGL. As provided in the Aircraft Flight Operations Manual the Operator will ensure that the UAS is in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the Operator and manufacturer are most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety. The FAA has granted exemptions for similar operations in Exemptions 11062 through 11067, 11080 and 11110.

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Federal Register Publication

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:

Petitioner seeks an exemption from the following rules:

14 C.F.R. §§ 61.113(a) & (b); 91.7(a); 91.119; 91.121; 91.151(a); 91.405(a); 91.407(a)(1); 91.409(a)(2) and 91.417 (a) & (b) to operate commercially a small unmanned vehicle (55 lbs. or less) for the following purposes: to conduct bridge inspections, flare stack inspection, utility-power generation system inspections and patrolling, aerial inspection and photography of residential and commercial utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers, pipeline inspection and patrolling, filmmaking, cinematography, and videography, precision agriculture with on board sensors, wildlife and forestry monitoring and mosquito and insect control, aerial surveying, construction site inspection and monitoring, public entity support operations, aerial video and live video feed to assist with search and rescue operations under the authority and support of local authority officials, aerial video and photography for public and private use including television, public events, and cinematography live feed and live newsgathering, training to persons individually or belonging to both private and public organizations to increase awareness and improve safety for current and future UAS operations within the NAS, special events: including high schools. colleges, professional sports, open air events and fairs, research, risk management and assessment, motion picture production, surface mining, closed set filming, disaster and catastrophe events.

Privacy and National Security

All flights will occur over private or controlled access property with the property owner's prior consent and knowledge. Inspection will be of inanimate objects in areas where the owners will have consented to the inspections or otherwise have agreed to allow the UAS and the Operator to be in the area where operations will take place.

The size of the UAS, its speed and restricted area of operation do not raise national security issues.

Summary

Approval of exemptions allowing commercial operations of sUAV's for petitioner to operate an unmanned aircraft system (UAS) to conduct bridge Inspections, flare stack inspection, utility-power generation system inspections and patrolling, aerial inspection and photography of residential and commercial utility infrastructure including but not limited to electrical power lines, wind turbines and cell towers, pipeline inspection and patrolling, filmmaking, cinematography, and videography, precision agriculture with on board sensors, wildlife and forestry monitoring and mosquito and insect control, aerial surveying, construction site inspection and monitoring, public entity support operations, aerial video and live video feed to assist with search and rescue operations under the authority and support of local authority officials, aerial video and photography for public and private use including television, public events, and cinematography live feed and live newsgathering, training to persons individually or belonging to both private and public organizations to increase awareness and improve safety for current and future UAS operations within the NAS, special events: including high schools. colleges, professional sports, open air events and fairs, research, risk management and assessment, motion picture production, surface mining, closed set filming, disaster and catastrophe events, will enhance safety by reducing risk.

Conventional operations, using jet or piston powered aircraft, ladders or placing people in swamps, on roofs or tall, hazardous or weakened structures, exposes them to higher risks than those created by use of a sUAV'S. Conventional aircraft that operate at extremely low altitudes just feet from the subject being inspected and in extreme proximity to people and structures present the risks associated with vehicles that weigh in excess of 6,000 lbs., carrying large amounts of jet A or other fuel (140 gallons for jet helicopters). Such aircraft must fly to and from the project location. In contrast, a sUAV weighing fewer than 55 lbs. and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The sUAV is carried to the target area and not flown. The sUAV will carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights.

The operation of small UASs, weighing less than 55 lbs., conducted under the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein. These lightweight aircraft operate at slow speeds, close to the ground, and in areas that are under the control of the customer for the operations and, as a result, are far safer than conventional operations conducted with turbine helicopters operating in close proximity to the ground and people or the use of individuals to climb the structures to conduct the operations.

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 and operation within visual line of sight and national security – provide more than

adequate justification for the grant of the requested exemptions allowing commercial operation of Petitioner's UAS for the Purposes outlined herein and are consistent with exemptions already granted, including Exemptions number 11171 through 11174, 11176, 11177, 11062, 11109, 11112, and 11213 and as recent as 11857.

Sincerely,
Django Greenblatt-Seay
5521 N 52nd St.
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and

Stephen Gowdy
Chief Pilot,
Gowdy Brothers Aerospace, LLC
Consulting Agent for Django Greenblatt-Seay