



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

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

July 23, 2015

Exemption No. 12126
Regulatory Docket No. FAA-2015-1594

Mr. John David Deans
Deans Consulting LLC
dba Central Texas Drones
6206 Ganske Road
Burton, TX 77835

Dear Mr. Deans:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated April 30, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Deans Consulting LLC dba Central Texas Drones (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial videography and photography.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom II Vision Plus.

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 collection¹. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA–2014–0352), 11109 to Clayco, Inc. (*see* Docket No. FAA–2014–0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA–2014–0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA–2014–0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Deans Consulting LLC dba Central Texas Drones is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

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

Conditions and Limitations

In this grant of exemption, Deans Consulting LLC dba Central Texas Drones 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 II Vision Plus when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.
2. Operations for the purpose of closed-set motion picture and television filming are not permitted.
3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.
4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.
5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.
6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.
7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and

limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed.

Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.
9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.
10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.
11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.
12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.
13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.
15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.
16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.
17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.
18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.
19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.
20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.
21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.
23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.
24. The UA must remain clear and give way to all manned aviation operations and activities at all times.
25. The UAS may not be operated by the PIC from any moving device or vehicle.
26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
 - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
 - b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.
28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.
30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
 - a. Dates and times for all flights;
 - b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
 - c. Name and phone number of the person responsible for the on-scene operation of the UAS;
 - d. Make, model, and serial or N-Number of UAS to be used;
 - e. Name and certificate number of UAS PICs involved in the aerial filming;
 - f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
 - g. Signature of exemption holder or representative; and
 - h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.
31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

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

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Enclosure

**IN THE MATTER OF THE PETITION FOR EXEMPTION OF:
DEANS CONSULTING LLC
DBA; CENTRAL TEXAS DRONES
FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIRMENTS
OF
TITLE 14 OF THE CODE OF FEDERAL REGULATIONS
SECTIONS 61.113 (a) and (b); 91.7 (a); 91.119 (c); 91.121;
91.151 (a); 91.405 (a); 91.407 (a) (1); 91.409 (a) (1) and (2); 91.417 (a) and (b)**

**Submitted on April 30, 2015
By,
John David Deans
DEANS CONSULTING LLC
DBA, CENTRAL TEXAS DRONES
979.203.1534**

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SUMMARY

DEANS CONSULTING LLC, which is Doing Business As (DBA) CENTRAL TEXAS DRONES, seeks exemptions from Title 14, Code of Federal Regulations §§ 61.113 (a) and (b), 91.7 (a), 91.119, 91.121, 91.151 (a), 91.405 (a), 91.407 (a)(1), 91.409 (a)(1) and (2), 91.417 (a) and (b) to operate a DJI PHANTOM II VISION PLUS VISON PLUS UAS. This exemption will allow DEANS CONSULTING LLC to operate an Unmanned Aerial Vehicle commercially for the purpose of conducting aerial videography and photography in the real estate and construction markets of Central and Southeast Texas. These images and videos will provide community awareness and geospatial understanding.

INTRODUCTION TO PETITIONER

DEANS CONSULTING LLC, is a consulting company serving the Information Technology (IT) needs of real estate clients which require the ability to produce high definition video and photos of rural properties in central Texas via UAS-based aerial photography. DEANS CONSULTING LLC seeks relief to use a Phantom II Vision Plus quad-copter to commercially capture video of listings while working on private property. DEANS CONSULTING LLC will utilize a Visual Observer (V.O.) while maintaining Visual Line of Sight (V.L.O.S.) between the quad-copter and a UAV operator who will have a current private pilot's license.

The UAV PHANTOM II VISION PLUS

The DJI PHANTOM II VISION PLUS VISON PLUS is a quad-rotor Unmanned Aircraft System (UAS) weighing less than 3 pounds. The Phantom II Vision Plus UAS that DEANS CONSULTING LLC will be responsible for also utilizes a mobile ground station. The UAS features a safety Return to Home function that in the event of a signal loss, the UAS will return to a preset position and land. The Return to Home feature can also be triggered manually. PHANTOM 2 VISION PLUS uses a 5.8GHz RC system. To avoid communication interference, DEANS CONSULTING LLC will not use other 5.8GHz devices (including 2.4G Wi-Fi or 2.4G wireless video transmission module) except the 2.4G Bluetooth and 2.4G Datalink. The Phantom II Vision Plus can fly at approximately 30kts. CENTRAL TEXAS DRONES has no need to operate at a speed greater than 10kts. The

Phantom II Vision Plus is powered by a single Lipo battery. This battery gives the Phantom II Vision Plus an approximate 15 minutes worth of flight time with its attached payload of the integrated DJI camera and the associated gimbal that connects the camera to the quad-copter.

BASIS FOR PETITION

DEANS CONSULTING LLC pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012, Section 333, Special Rules for Certain Unmanned Aircraft Systems, hereby petitions the Administrator to operate the DJI PHANTOM II VISION PLUS UAS within the National Airspace System, and for an exemption from the requirements of 14 C.F.R. §§ 61.113 (a) and (b), 91.7 (a), 91.119, 91.121, 91.151 (a), 91.405 (a), 91.407 (a)(1), 91.409 (a)(1) and (2), 91.417 (a) and (b).

A. Name and Address of The Petitioner

DEANS CONSULTING LLC
6206 Ganske Road
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979.203.1534

B. DEANS CONSULTING LLC Requests Relief from the Following Sections of 14 C.F.R.

1. Sections 61.113, entitled *Private pilot privileges and limitations: Pilot in Command*, Subsections (a) and (b) prescribed the following, in part:

(a) No person who holds a private pilot certificate may act as a pilot in command (PIC) of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as PIC of an aircraft.

(b) A private pilot may, for compensation or hire, act as PIC of an aircraft in connection with any business or employment if –

(1) The flight is only incidental to that business or employment and

(2) The aircraft does not carry passengers or property for compensation or hire.

2. Section 91.7, entitled *Civil airworthiness*, subsection (a), states the following:

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

3. Section 91.119, entitled *Minimum Safe Altitudes: General*

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) Anywhere, An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) Over congested areas. An altitude of 1000 feet above the highest obstacle within a horizontal radius of 2000 feet of the aircraft.

(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle or structure.

(d) Helicopters, powered parachutes, and weight-shift-control aircraft. If the operation is conducted without hazard to persons or property on the surface—

- (1) A helicopter may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section, provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA; and
- (2) A powered parachute or weight-Shift-Control aircraft may be operated at less than the minimums prescribed in paragraph © of this section.

4. Section 91.121, entitled *Altimeter Settings*, subsection (a), states the following, in relevant part:

(a) Each person operating an aircraft shall maintain the cruising altitude of flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating—

(1) Below 18,000 feet MSL, to—

- (i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
- (ii) If there is not station within the area prescribed in paragraph (a)(1)(i) of this section, the current reported altimeter setting of an appropriate available station; or
- (iii) In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure;

5. Section 91.151, entitled *Fuel requirements for flight in VFR conditions*, subsection (b), states the following:

(b) No person may begin a flight in a rotorcraft 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, to fly after that for at least 20 minutes.

6. Section 91.405, entitled *Maintenance required*, subsection (a) stated the following:

Each Owner or Operator of an Aircraft-

(a) Shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspection, except as provided in

paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter.

7. Section 91.407(a)(1), entitled *Operation after maintenance, preventive maintenance, rebuilding, or alteration*, subsections (a)(1), states the following:

(a) No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless—

(1) It has been approved for return to service by a person authorized under §43.7 of this chapter.

8. Section 91.409, entitled *Inspections*, subsection (a), states the following:

(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had—

(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by § 43.7 of this chapter; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

9. Section 91.417, entitled *Maintenance Records*, subsections (a) and (b), state the following:

(a) Except for work performed in accordance with §§ 91.411 and 91.413, each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—

- (i) A description (or reference to data acceptable to the Administrator) or the work performed; and
- (ii) The date of completion of the work performed; and
- (iii) The signature, and certificate number of the person approving the aircraft for return to service

(2) Records containing the following information:

- (i) The total time in service of the airframe, each engine, each propeller, and each rotor.
- (ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.
- (iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.
- (iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
- (v) The current status of applicable airworthiness directives (AD) and safety directives including, for each, the method of compliance, the AD or safety directive number and revision date. If the AD or safety directive involves recurring action, the time and date when the net action is required.
- (vi) Copies of the forms prescribed by § 43.9(d) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.
 - a. The Owner or operator shall retain the following records for the periods prescribed:
 - (1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.
 - (2) The records specified in paragraph (a)(2) of this sections shall be retained and transferred with the aircraft at the time the aircraft is sold.
 - (3) A list of defects furnished to a registered owner or operator under § 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

C. The Extent Of Relief That DEANS CONSULTING LLC Seeks

1. Extent of Relief that DEANS CONSULTING LLC Seeks Regarding

Section 61.113 (a) and (b) *Private Pilot Privileges and Limitations*

Relief from Section 61.113 (a) and (b) is requested to allow a Pilot in Command holding a current Private Pilots Certificate to operate the Central Texas Drones Phantom II Vision Plus The flight would be complimented by a Visual Observer who, along with the pilot, will maintain Visual Line of Sight with the Phantom II Vision Plus at all times. All operations conducted will be incidental to Central Texas Drones' business. The Phantom II Vision Plus is not able to carry passengers.

2. Extent of Relief that Central Texas Drones seeks in Regards to Section 91.7(a) *Civil Aircraft Airworthiness*

Relief from Section 91.7(a) is requested to allow Central Texas Drones to determine airworthiness of the Phantom II Vision Plus As part of this determination the following will be adhered to:

- a. Prior to the Phantom II Vision Plus' flight the PIC will inspect the UA to ensure it is in a condition that will be conducive for a safe flight. The ground control station will be included in the above inspection.
- b. Central Texas Drones will follow the DJI Phantom II Vision Plus' aircraft/component, maintenance, overhaul, replacement, inspection and life limit requirements.
- c. Central Texas Drones will comply with all DJI manufacturer Safety Bulletins.

3. Extent of Relief that Central Texas Drones seeks in Regards to Section 91.119 *Minimum Safe Altitudes General*

Relief from 91.119 is requested to allow Central Texas Drones to operate the Phantom II Vision Plus at altitudes not to exceed 400' AGL over private property at a distance at or greater than 5NM from the nearest airport as depicted on current Aeronautical Charts. Central Texas Drones also wishes to be granted exemption to operate at an altitude not greater than 50' AGL (below tree level) between 1NM and 5NM from the nearest airport as depicted on current Aeronautical Charts.

Central Texas Drones will adhere to the following in order to maintain an acceptable level of safety associated with operations over private property:

- (a) Central Texas Drones will display signs in the immediate vicinity of operations stating: "Aerial Photography In Progress. Use Caution."
- (b) Central Texas Drones will not allow the Phantom II Vision Plus to operate at a speed greater than 10kts.
- (c) Central Texas Drones will require the UAS operator (PIC) to be fully trained on the Phantom II Vision Plus by adhering to the recommendations contained within the Phantom II's operating manual.
- (d) Central Texas Drones' UAS operator (PIC) will have accumulated and logged, in a manner consistent with 14 CFR 61.51(b), a minimum of 25 hours of total time as a UAS rotorcraft pilot including at least 10 hours logged as a UAS pilot with a multi-rotor UAS. In addition the operator will have logged a minimum of 5 hours as a UAS pilot operating the make and model UAS that Central Texas Drones operates.
- (e) Central Texas Drones' UAS operator (PIC) will be familiar with and able to manually institute the Phantom II's Return to Home (RTH) feature. This feature aborts a flight operation and automatically returns the UAS to a predetermined GPS safe point.
- (f) Central Texas Drones' UAS operator (PIC) will not operate over private property without first finding a suitable alternate landing spot on the property.
- (g) Central Texas Drones' UAS operator (PIC) will abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.

(h) Central Texas Drones will utilize a two man flight team consisting of the Pilot in Command (PIC) and a Visual Observer (VO). This team will maintain visual line of sight with the Phantom II Vision Plus at all times and remain within hearing of one another.

(i) Central Texas Drones will not permit flight around vessels, vehicles and structures without permission from the owner.

4. Extent of Relief that Central Texas Drones Seeks in Regards to Section 91.121 *Altimeter Settings*

Relief from 91.121 is requested because the Phantom II Vision Plus utilizes electronic GPS with a barometric sensor.

In order to maintain an equal level of safety that 91.121 requires, the PIC of the Central Texas Drones UAS will abort the flight in the events that the UA loses communications with the GPS signal.

5. Extent of Relief that Central Texas Drones Seeks in Regards to Section 91.151(b) *Fuel Requirements for Flight in VFR Conditions*

Relief from 91.151(b) is requested to the extent that allows Central Texas Drones to operate the Phantom II Vision Plus up to a point (considering wind and forecast weather conditions) that there is enough power to fly at normal cruising speed to the intended landing point and land the UA with 40% battery power remaining.

6. Extent of Relief that Central Texas Drones Seeks in Regards to Sections 91.405(a), 91.407(a)(1), 91.409(a)(1), and (a)(2), 91.417(a) and (b) *These are all associated a with Airworthiness certificate*

Relief from 91.405(a), 91.407(a)(1), and (a)(2), And 91.417(a) and (b) is requested to the extent that allows Central Texas Drones to operate the Phantom II Vision Plus Quad-Copter as necessary. These sections are all related to airworthiness certificates of aircraft. There is not currently an airworthiness certificate for small UAS's. Central Texas Drones would comply in full to any conditions and limitations that the Administrator would place in order to receive an approved Grant of Exemption.

D. THE REASONS WHY GRANTING THE EXEMPTION WOULD BE IN THE PUBLICS INTEREST

1) Aerial photography lends a unique perspective to the viewer. The angles of capture show areas that are not able to be seen by an earthbound photographer. This type of photography has been used for some time by real estate agencies and construction firms. Unfortunately though, it is often cost prohibitive for small business. The expensive fees demanded by traditional aerial photography outfits have often given large firms an advantage. With a Grant of Exemption from the Administrator, Central Texas Drones can be of immense benefit to small business by providing affordable aerial photography.

2) The granted use of aerial photography by Central Texas Drones would assist the public by allowing them to form a geospatial perspective and academic understanding of the area surrounding the subject of their interests. This would certainly help the clients of Central Texas Drones garner business and therefor would directly have a positive effect upon the economy.

3) The risk associated with UAS aerial photography is less than the risk associated with traditional aerial photography. The UAS that Central Texas Drones incorporates weighs less than 3lbs. This UAS is also fueled by a single battery. The amount of damage that may occur in the event of an incident or accident is substantially less than that which may occur in the event of an incident or accident involving the traditional form of aerial photography. Traditional aerial real estate photographers rely upon full size aircraft operating at low altitudes and with a full load of combustible fuel. Responsible UAS operations are inherently in the public's interest.

E. The Reason Why Granting The Exemption Would Not Adversely Affect Safety.

Central Texas Drones' high level of professionalism and desire to set the standard for successful and safe UAS real estate operations squarely coalesces with the FAA's safety mission. In addition, Central Texas Drones will strictly follow the conditions and limitations of the FAA Grant. Some procedures that Central Texas Drones has in place include:

- a) Standard Operating Procedures (SOP); which will include a pre-flight checklist, airworthiness inspection by the Pilot in Command, signage depicting a notice of aerial photography in progress, and NOTAMS issued 48 hours in advance of a flight.
- b) During flight operations, Central Texas Drones will utilize a two person team consisting of the Pilot in Command and a Visual Observer. All operations will remain within line of sight of the UAS team.
- c) The UAS will at all times have the GPS Return to Home safety feature activated. In the event of a "loss of signal" or if the Pilot in Command deems it necessary the UAS will return to a preset position and land.
- d) In the event that the aerial photography safety zone is violated, the Pilot in Command will abort the mission and return to the safe landing zone.
- e) Central Texas Drones will only operate the UAS over private property with the permission of the property owner and will stay a safe distance away from vehicles, structures and people.
- f) As Federal guidelines are developed, Central Texas Drones will stay up to date and within compliance of all changes.

F. Additional Information

This Petition is made pursuant to the FAA Modernization and Reform Act of 2012 (FMRA) Section 333, which directs the Secretary of Transportation to determine if certain UAS may operate safely in the NAS. Central Texas Drones commitment to being at the forefront of the rapidly emerging UAS commercial use sector is second only to their commitment to operating responsibly. Central Texas Drones owner, John David Deans, holds a private single engine land certificate and will be the primary Pilot in Command of the Phantom II Vision Plus UAS that Central

Texas Drones will use in the Real Estate/Construction markets. This added investment of not only being the Pilot in Command but also the owner of the company, gives Central Texas Drones a commitment to safety and excellence that will lead it to becoming the flag bearer for small business UAS use.

Central Texas Drones will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption.

All aircraft operated by Central Texas Drones, in accordance with this exemption, will be identified by serial number and registered in accordance with 14 CFR part 47. CENTRAL TEXAS DRONES will comply with making November markings in accordance with 14 CFR part 45, Subpart C. The November markings placed upon the Central Texas Drones Phantom II Vision Plus UAS will be as large as practical.

Attached are the Operating Manual and Quick Start Manual that are used in conjunction with the Central Texas Drones Standard Operating Procedures.

G. Summary to be Printed in Federal Register

DEANS CONSULTING LLC requests exemption from TITLE 14 OF THE CODE OF FEDERAL REGULATIONS SECTIONS 61.113 (a) and (b); 91.7 (a); 91.119 (c); 91.121; 91.151 (a); 91.405 (a); 91.407 (a) (1); 91.409 (a) (1) and (2); 91.417 (a) and (b). CENTRAL TEXAS DRONES requests relief from these sections from the FAA Administrator per the intentions of the FAA Modernization and Reform Act of 2012 so that DEANS CONSULTING LLC can produce photography and video for clients within the real estate and construction markets.

CONCLUSION

As set forth herein, DEANS CONSULTING LLC seeks an exemption pursuant to 14 C.F.R. § 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of the DJI PHANTOM II VISION PLUS UAS commercially within the Real Estate and Construction markets. The Administrator will be assisting small business by granting this petition. In accordance with the FAA Modernization and Reform Act of 2012, CENTRAL TEXAS DRONES respectfully requests that the FAA Administrator grants this petition for exemption from TITLE 14 OF THE CODE OF FEDERAL REGULATIONS SECTIONS 61.113 (a) and (b); 91.7 (a); 91.119 (c); 91.121; 91.151 (a); 91.405 (a); 91.407 (a) (1); 91.409 (a) (1) and (2); 91.417 (a) and (b)

If there are any areas that have not been addressed, please contact me for supplemental information.



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