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

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

June 23, 2015

Exemption No. 11867
Regulatory Docket No. FAA–2015-1098

Mr. Randall Connell
Environmental Professional, Project Manager
InTEC of San Antonio, LP
12028 Radium Drive
San Antonio, TX 78216

Dear Mr. Connell:

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 14, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of InTEC of San Antonio, LP (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct inspections and aerial surveys.

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

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

Airworthiness Certification

The UAS proposed by the petitioner are the DJI Phantom Vision 2 and DJI Phantom 3.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. 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 the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

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

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

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, InTEC of San Antonio, LP 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, InTEC of San Antonio, LP 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 Vision 2 and DJI Phantom 3 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed.

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

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be

operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification

(N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

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

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

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

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

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

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

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

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

This exemption terminates on June 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

April 14, 2015

From: Randall Connell

To: Federal Aviation Administration

To Whom it May Concern,

Since 1991 INTEC SA has been provided engineering services in geotechnical engineering and construction materials testing and has expanded services to include environmental and geological assessment services.

In the FAA Modernization and Reform Act of 2012, Congress directed the FAA "to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system" and, under Section 333 of that law, gave the FAA power to grant innovators "expedited operational authorization" to do so. By this petition, INTEC SA is seeking authorization to conduct sUAS operations on our own sites to improve safety for our employees and ensure quality assurance for the facilities we are inspecting.

Further, granting this request will do nothing more than allow INTEC SA to do what thousands of hobbyists and manufacturers of model aircraft do every day, except we will abide by much stronger safety measures. INTEC SA has hired a licensed private pilot to manage our sUAS program. Under his supervision we would provide a safe level of operation that is superior to current regulations. His experience as a FAA licensed private pilot gives him an understanding of how manned aircraft safely navigate the National Airspace System (NAS). This invaluable experience applied to INTEC SA's UAS program equates to safe sUAS use on our projects with no confliction with manned aircraft.

A. Mailing address and other contact information:

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InTEC of San Antonio, LP
12028 Radium Drive
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210-525-9033 office
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http://www.intec-sa.com/

B. The specific section or sections of 14 C.F.R from which INTEC SA seeks exemption.

1. 14 CFR Part 21, Subpart H: Airworthiness Certificates.
2. 14 CFR 91.203(a) & (b) Civil aircraft: Certifications required.
3. 14 CFR 45.23 Display of Marks; General and 45.29 Size of Marks.
4. 14 CFR 91.9 Civil Aircraft Flight Manual, Marking, and Placard Requirements.
5. 14 CFR 91.119 Minimum Safe Altitudes.
6. 14 CFR 91.121 Altimeter Settings.
7. 14 CFR 91.151 Fuel Requirements for Flight in VFR Conditions.
8. 14 CFR Subpart E (91.401 - 91.417) - Maintenance, Preventive Maintenance, and Alterations.
9. FAA Notice 8900.227 Paragraph 16(c) (4) PIC Medical and Paragraph 16(e)(1) Observer Medical.

C. The extent of relief INTEC SA seeks, and the reason INTEC SA seeks the relief.

INTEC SA seeks exemption from several interrelated provisions of 14 C.F.R. Parts 21, 45, 91, and FAA Notice 8900.227 to the extent necessary to engage in commercial operations of a sUAS on our own sites. If granted these exemptions we would operate the sUAS with the property owner's written permission. INTEC SA's intent is to use a sUAS for the following inspections:

1. Quality Control / Quality Assurance Inspections
2. Aerial Surveys

We have detailed below a significant set of safeguards that will apply to our proposed sUAS inspection operations. Operations under these safeguards will provide a level of safety exceeding the level of safety required of similar sUAS operations that the FAA authorizes currently. In addition, our operations will not create a hazard to users of the national airspace system or the public or pose a threat to national security and are thus consistent with the congressional mandate in Section 333 of the FAA modernization and Reform Act of 2012, which gives the FAA a mechanism to allow certain UAS to operate safely in the national airspace system.

D. The reasons why granting INTEC SA's request would be in the public interest; that is, how it would benefit the public as a whole.

This would benefit the public by giving INTEC SA a capable risk mitigated inspection platform. The proposed sUAS gives INTEC SA an alternative to sending our employees into dangerous situations in order to accomplish necessary and required construction inspections. This in turn could prevent accidents and/or construction related deaths. This would have a positive trickledown effect to families of our employees and people that work on site which ultimately benefits the public.

E. The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which INTEC SA seeks the exemption.

INTEC SA sUAS operations will provide a level of safety that far exceeds the level of safety required by the FAA for hobbyists and manufacturers of model aircraft. The following operating procedures will apply during the sUAS inspection operations under this exemption request.

1. The sUAS that INTEC SA has chosen to work with is the Phantom Vision 2 and/or 3 and will be powered via a battery source. INTEC SA will only use sUAS that are below 4.4 pounds now and in the future.

2. INTEC SA inspection operations will be conducted:

i. within the visual line of sight of the Pilot in Command (PIC) and one or more Visual Observers (VO).
ii. at less than 400 feet AGL
iii. within Class G airspace.

3. INTEC SA inspection operations will be conducted in a confined area over isolated private property located at least 5 miles away from any airport, heliport, seaplane base, spaceport or other location with aviation activities, and any military or U.S. government installations or airfields. If we are within the 5 mile radius of any of the above installations INTEC SA will seek written approval from that installation's owner before sUAS inspection operations take place. If said installation owner requires stricter guidelines for operation then INTEC SA will comply.

4. All sUAS operations will remain within the lateral and vertical boundaries of the operating area, taking into account all factors, including wind, gross weight and glide distances, that may affect the capability of the sUAS to remain within the airspace boundary; moreover, the ceiling height will be no more than 400 feet AGL.

5. INTEC SA sUAS inspection operations under this exemption will be conducted under the supervision designated PIC who ultimately has final responsibility for the operation in accordance with 14 C.F.R. 91.3 and holds a FAA private pilot license.

6. PIC will maintain the sUAS system in a condition for safe operation, and conduct a pre-flight inspection prior to each flight so as to ensure that the sUAS, control station, data link equipment, camera, and support equipment are in a condition for safe operation and in a configuration appropriate for the purpose of the intended flight.

7. The PIC and VO will maintain two-way communications with each other during all operations; if unable to

maintain two-way communications, or if any condition occurs that may otherwise cause the operation to be unsafe, the operator will immediately conclude the operation.

8. Each sUAS that INTEC SA will employ under this exemption will safely return automatically to a home location designated by the PIC if the communications link is lost.

9. The aircraft documentation required by 14 C.F.R. §§ 91.9 and 91.203(b), as applicable, will be available to the PIC referred to above at any time INTEC SA sUAS are operating.

INTEC SA will effectively operate under our own standard operating procedures that will provide additional safeguards that go far beyond the level of safety for public model airplane fields.

F. A summary the FAA can publish in the Federal Register, stating: (1) The rule from which you seek the exemption; and (2) A brief description of the nature of the exemption you seek.

1. Petitioner: InTEC SA
2. Sections of 14 C.F.R. Affected: §§ Part 21, Subpart H; 91.203; 45.23; 91.9; 91.119; 91.121; 91.151; Subpart E; and 8900.227 para(16)(4).
3. Description of Relief Sought: Petitioner seeks relief from the requirements of 14 C.F.R. §§ Part 21, Subpart H; 91.203; 45.23; 91.9; 91.119; 91.121; 91.151; Subpart E; and 8900.227 para(16)(4)in order to conduct commercial small unmanned aircraft system operations on supported sites with owner approval subject to operating procedures that meet or exceed those that FAA requires for similar operations.

G. Any additional information, views, or arguments available to support your request.

Please see the introduction to this exemption request.

H. If you want to exercise the privileges of your exemption outside of the United States, the reason why you need to do so.

InTEC SA does not wish to exercise the privileges of this exemption outside of the United States at this time.

Thank you for your consideration and I look forward to your response. I can be contacted directly via email or cell phone at your convenience.

Sincerely,
InTEC of San Antonio, LP

Randall W Connell, EP
Environmental Professional
Project Manager
Environmental Services Division

Murali Subramanian, Ph.D., P.E.

Copies: one, via email