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

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

April 1, 2015

Exemption No. 11275
Regulatory Docket No. FAA–2014–0825

Mr. Robert Mauro
Danis Building Construction Company
3233 Newmark Road
Miamisburg, OH 45342

Dear Mr. Mauro:

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.

The Basis for Our Decision

By letter dated October 8, 2014,[1] you petitioned the Federal Aviation Administration (FAA) on behalf of Danis Building Construction Company (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct aerial inspections on construction sites.

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

Discussion of Public Comments:

A summary of the petition was published in the Federal Register on November 13, 2014, (79 FR 67538). Three comments were received. The Small UAV Coalition (Coalition), supported the petition. The Airline Pilots Association, International (ALPA) and the National Agricultural Aviation Association (NAAA) opposed it.

[1] By letter dated January 27, 2015, the petitioner responded to the FAA's request for information.

In support of the petition, the Coalition states the petitioner has proposed to abide by stronger safety measures than hobby and modeler groups operating similar aircraft. The Coalition states that it does not believe that heightened safety measures should be required for the petitioner simply because of the commercial nature of its operations. The Coalition urged the FAA to adopt an evaluation framework for UAS operations under Section 333 of Pub. L. 112–95 that weighs the relative safety issues and risks of UAS by class and operational circumstances, rather than adopting artificial distinctions among unmanned aerial vehicles based on commercial and noncommercial operations. The petitioner's UAS pose considerably less safety risk than larger UAS. The Coalition asserted that because UAS operations like the petitioner's pose minimal risk to safety, they should be subject to minimal and appropriate regulations.

The Coalition noted the FAA is to consider the seven factors[2] in Section 333 as a minimum. The Coalition stated the petition shows the FAA should consider factors other than those specified in Section 333, such as location, altitude of its UAS, and pilot training and experience. The Coalition maintained that the petitioner's proposed operations satisfy the seven factors in Section 333 and include several additional mitigating factors to ensure the safety and security of the proposed UAS operations. The Coalition emphasized the FAA must evaluate each factor within the context of the petitioner's proposed UAS operations.

The Coalition also commented that the FAA should grant relief from the requirement to hold an airman's certificate. The Coalition further stated that if an airman certificate is required then, at a minimum, the FAA should provide an exception from the training and testing requirements in part in favor of requirements pertinent to the aircraft and operation proposed. The Coalition also asserted section 333 Congress intended for the FAA to consider national security with respect to the operation as opposed to addressing it through pilot certification.

The FAA notes that, as discussed in the grant of exemption to Trimble Navigation Ltd. (No. 11110), neither section 333 nor the FAA's exemption authority[3] allows the FAA exempt pilots from the statutory requirement to hold an airman certificate as prescribed in 49 U.S.C. § 44711.

The Coalition commented that a visual observer (VO) should not be required for all small UAS operations. The Coalition further asserted that the presence of one or more VOs may allow the UAS to be operated beyond visual line of sight (VLOS) of the pilot in command (PIC) and that the petitioner's proposal to operate the unmanned aircraft (UA) within VLOS of the PIC and/or VO should be permitted.

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[2] Section 333(b) of P.L. 112-95 states, in part: "In making the determination under subsection (a), the Secretary shall determine, at a minimum-- (1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; …"

[3] 49 USC § 44701(f)

The FAA notes that one of the determinations for operations under section 333 is operation within visual line of sight. The PIC must maintain VLOS while operating the UA. The FAA finds that a VO complements the PIC's capability to see and avoid other aircraft, including when the PIC may be momentarily attending to other flying tasks. The VO provides an additional level of operational safety.

ALPA expresses concern regarding several aspects of the petition. ALPA notes the petitioner's reference to operations conducted within confined areas is not defined, nor does the petitioner detail procedures for controlling the airspace or area of operation. Specifically, ALPA states "there must be means both to ensure that the sUAS remains within the defined airspace and to ensure that the hazard of other aircraft intruding on the operation is mitigated." The FAA believes the limitations under which the petitioner will operate (i.e. VLOS and at or below 400 feet AGL) are sufficient mitigations to this risk so that the operations will not adversely affect safety.

Regarding the petitioner's statement that the PIC and observer will be able to communicate by voice, ALPA states that the pilot and observer should be able to maintain a visual observation of the aircraft and area of operation when using voice communication. NAAA states UAS observers must be present and able to communicate with the operator from the most minimal distance possible. The conditions and limitations regarding PIC and VO communications address those concerns.

ALPA asserts the UAS's lithium polymer batteries have numerous associated fire and explosion hazards as outlined in DOT/FAA/AR-09/55, "Flammability Assessment of Lithium-Ion and Lithium-Ion Polymer Battery Cell Designed for Aircraft Power Usage (January 2010)," and that the safe carriage of the batteries and the mitigations in place for known risks should be addressed. The referenced study was primarily conducted to determine how certain battery cells react in a fire situation aboard manned airplanes. Given the size of the battery and the operating conditions of the UAS, the FAA concludes that the use of a lithium polymer battery will not pose an undue safety risk for the proposed operations.

ALPA comments that command and control (C2) link failures are one of the most common failures on a UAS, and that lost link mitigations should require safe modes to prevent flyaways or other scenarios. The FAA has inserted conditions and limitations in this exemption to mitigate the risk associated with such failures.

ALPA also notes that the petitioner's proposed operations are for "compensation or hire," and therefore contends the pilot must hold at least a current FAA commercial pilot certificate with an appropriate category and class rating for the type of aircraft being flown, as well as specific and adequate training on the UAS make and model intended to be used. Similarly, ALPA asserts a current second-class airman medical certificate should be required. NAAA also commented on pilot qualification, stating—

> Just as manned aircraft pilots are required to undergo a rigorous training curriculum and show that they are fit to operate a commercial aircraft, so too must UAS operators. Holding a commercial certificate holds UAS operators to similar high standards as commercial aircraft operators and ensures they are aware of their responsibilities as commercial operators within the NAS. Medical requirements ensure they have the necessary visual and mental acuity to operate a commercial aircraft repeatedly over a sustained period of time.

The FAA has reviewed the knowledge and training requirements to obtain sport, recreational, private and commercial certificates and concluded that a UAS PIC holding a minimum of a sport pilot certificate , and operating under this exemption, would not adversely affect operations in the NAS or present a hazard to persons or property on the ground.

Although the petitioner did not request an exemption from § 91.113, ALPA notes the petitioner must specify a means to meet see and avoid requirements in § 91.113 given the absence of an onboard pilot. The FAA notes that all flights must be operated within VLOS of the PIC and VO.

ALPA commented the aircraft will not have a barometric altimeter as required by 14 CFR § 91.121. ALPA stated that processes or mitigations must be in place to ensure the UA can accurately maintain altitude including engineering processes, software development and control, electronic hardware development and control, configuration management, and design assurance to ensure the aircraft and its control system(s) operate to the same level of safety as other aircraft operated commercially in the National Airspace System (NAS).

Regarding the fuel requirements of § 91.151, ALPA argues that using batteries as the only source of an aircraft's power is a substantial shift from traditional methods of propulsion, and requires further research to determine best safety practices. This comment is addressed in detail below.

ALPA also expresses concern that the petitioner's request is not for a single specific operation or location, but for all operations of the same general type. ALPA states that this results in a considerable increase in the FAA's oversight tasks. The FAA notes ALPAs concern and in order to minimize potential impact to the NAS, the FAA requires that each operator secure a Certificate of Authorization or COA which covers specific details of the petitioners operation. The FAA recognizes that UAS integration will generate new NAS access demand and will review and adjust accordingly.

NAAA noted that its members operate in low-level airspace, and therefore clear low-level airspace is vital to the safety of these operators. NAAA stated that seeing and avoiding other aircraft and hazardous obstructions is the backbone for agricultural safety, and that

agricultural pilots depend on pilots of other aircraft to perform their see-and-avoid functions to prevent collisions. NAAA believes UAS operations at low altitudes will increase the potential for collision with agricultural aircraft.

The FAA recognizes these concerns and has incorporated associated conditions and limitations into this exemption, including: (a) a Notice to Airmen (NOTAM) issued for all operations; (b) operations conducted within VLOS of the pilot in command (PIC) and the VO; and (c) the UAS PIC must always yield right-of-way to manned aircraft.

NAAA stated that FAA airworthiness certification should be a requirement for all unmanned aircraft to operate within the NAS. NAAA recommended UAS be equipped with ADS-B or similar identification and positioning systems, strobe lights, high-visibility markings and registration numbers. NAAA also recommended UAS be operated strictly within the line-of-sight of the ground controller, with the assistance of a VO and clear of any low-flying manned aircraft.

As discussed below, Section 333 of the FAA Modernization and Reform Act of 2012 authorizes the Secretary of Transportation to determine, considering a number of factors laid out in the statute, that an airworthiness certificate is not necessary for certain operations. The Secretary has made that determination in this case and therefore the aircraft operated by the petitioner will not need to be certificated by the FAA.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom Vision 2+.

The petitioner requested relief from 14 CFR part 21, C*ertification 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, 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. 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, Danis Building Company 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.

Conditions and Limitations

In this grant of exemption, Danis Building Company 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+ 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 Colombia, 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 April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

DANIS

8 Oct 2014

From: Robert A. Mauro
To: Federal Aviation Administration

Subject: REQUEST FOR ISSUANCE OF EXEMPTION UNDER TITLE 14 CFR, SECTION 333

Ref: (a) FAA Notice 8900.268
(b) Title 14 CFR

Encl: (1) Explanation of Exemptions from 14 C.F.R.

To Whom it May Concern,

Since 1916, Danis Building Construction Company (DBCC) has been privileged to work on some of the most recognizable and high-profile commercial buildings and industrial projects in the Midwest, Southeast, and Carolinas. Our work includes partnerships with Fortune 500 Companies, rapidly expanding healthcare systems, and distinguished universities.

As a general contractor, DBCC is required to perform many different inspections on the outside of existing buildings. These inspections govern and/or validate our construction techniques and procedures and often require our employees to be put in situations that require DBCC to accept risk. We have found that by using a small unmanned aircraft system "sUAS" with a high resolution camera mounted on it, often times we can accomplish the same inspection and alleviate the need to put our employees in danger.

Danis shares Congress's goal of getting sUAS flying commercially in the United States safely and soon. 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, DBCC is seeking authorization to conduct sUAS operations on our own construction sites in order to improve safety for our employees and ensure quality assurance for the structures we are creating.

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

Information Supporting this Petition as Specified in 14 C.F.R. §11.81

A. Mailing address and other contact information:

Danis Building Construction Company
Re: Quad Copter Operations

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Miamisburg, Ohio 45342
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B. The specific section or sections of 14 C.F.R from which DBCC 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 DBCC seeks, and the reason DBCC seeks the relief.

DBCC 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 construction sites. If granted these exemptions we would operate the sUAS with the property owner's written permission. DBCC's intent is to use a sUAS for the following inspections:

1. Surveying in hard to reach areas of buildings.
2. Roof Top Inspections.
3. Building Exterior Envelope Inspections.
4. Visual Documentation of Existing Conditions before Demolition of Key Areas.
5. Quality Control / Quality Assurance Inspections.

We have detailed, below and in enclosure (1), 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 DBCC'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 DBCC a capable risk mitigated inspection platform. The proposed sUAS gives DBCC an alternative to sending our employees into dangerous situations or placing large equipment next to occupied building spaces 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 DBCC seeks the exemption.

DBCC 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 DBCC has chosen to work with has an operational weight of 2.6 pounds and will be powered via a battery source. DBCC will only use sUAS that are below 4.4 pounds now and in the future if these exemptions are granted.

2. DBCC 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. DBCC 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 DBCC 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 DBCC 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. DBCC 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 either holds a current FAA private pilot certificated, a higher FAA pilot certification, or a FAA-recognized equivalent or has completed FAA private pilot ground instruction and passed the FAA private pilot written exam.

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.

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8. Each sUAS that DBCC 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 DBCC sUAS are operating.

DBCC 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: Danis Building Construction Company.
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 construction 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.

DBCC 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.

Respectfully,

Robert Mauro
MEP Coordinator

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