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

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

August 26, 2016

Exemption No. 17078
Regulatory Docket No. FAA–2015–2354

Mr. Thomas Jargiello
Director
Miami Dade College
Eig-Watson School of Aviation
2460 N.W. 66 Avenue
Miami, FL 33122

Dear Mr. Jargiello:

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 Miami Dade College (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct flight education programs.

See the docket, at www.regulations.gov, 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

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 the aircraft identified by the petitioner 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 petitioner proposed to use UAS that have previously been approved by the Secretary of Transportation under Section 333 of the FAA Modernization and Reform Act of 2012. UAS that have been previously approved by the Secretary, including the aircraft proposed by the petitioner, are found on the List of Approved Unmanned Aircraft Systems (UAS) under Section 333. The list, which will be updated periodically, is posted at www.regulations.gov under docket number FAA-2007-3330. The petitioner is also authorized to operate any UAS on that list, when weighing less than 55 pounds including payload while this exemption is valid.

The Basis for Our Decision

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), 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), 12645 to Allied Drones (*see* Docket No. FAA-2014-0804), 11433A to Cape Productions (*see* Docket No. FAA-2015-0223), 13465A to Kansas State University (*see* Docket No. FAA-2014-1088), and 15005 to Thomas R. Guilmette (*see* Docket No. FAA-2015-5829), 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, 11213, 12645, 11433A, 13465A, and 15005;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, 11213, 12645, 11433A, 13465A, and 15005 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, the petitioner 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 conduct UAS operations in accordance to the conditions and limitations listed below.[1]

Conditions and Limitations

In this grant of exemption, Miami Dade College 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. The operator is authorized by this grant of exemption to use any aircraft identified on the List of Approved Unmanned Aircraft Systems (UAS) under Section 333 at regulatory docket FAA–2007–3330 at www.regulations.gov, when weighing less than 55 pounds including payload. Proposed operations of any aircraft not on the list currently posted to the above docket will require a new petition or a petition to amend this exemption.

2. If operations under this exemption involve the use of foreign civil aircraft[2] the operator would need to obtain a Foreign Aircraft Permit pursuant to 14 CFR § 375.41 before conducting any commercial air operations under this authority. Application instructions are specified in 14 CFR §375.43. Applications should be submitted by electronic mail to the DOT Office of International Aviation, Foreign Air Carrier Licensing Division. Additional information can be obtained via https://cms.dot.gov/policy/aviation-policy/licensing/foreign-carriers.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The operator 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. This limitation is in addition to any altitude restrictions that may be included in the applicable COA.

5. *Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA).* All operations must be conducted in accordance with an ATO-issued COA. The

[1] In this exemption, UAS operations are restricted to training and aerial data collection, which 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.

2 Foreign civil aircraft means (a) an aircraft of foreign registry that is not part of the armed forces of a foreign nation, or (b) a United.States.-registered aircraft owned, controlled or operated by persons who are not citizens or permanent residents of the United States. 14 CFR §375.1.

exemption holder must apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the enclosed COA.

6. The pilot in command (PIC) must have the capability to maintain visual line of sight (VLOS) 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 that individual's FAA-issued airman medical certificate or valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal Government, to see the UA.

7. All operations must utilize a visual observer (VO). The UA must be operated within the VLOS of the VO at all times. The VO must use human vision unaided by any device other than corrective lenses to see the UA. The VO, the person manipulating the flight controls of the small UAS, and the 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. Students receiving instruction or observing an operation as part of their instruction may not serve as VO's.

8. This exemption, the List of Approved Unmanned Aircraft Systems (UAS) under Section 333 at regulatory docket FAA-2007-3330 at www.regulations.gov, all previous grant(s) of exemption, and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this 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, the applicable ATO-issued COA, and the procedures outlined in the operating documents, the most restrictive conditions, limitations, or procedures apply and must be followed. The operator may update or revise its operating documents as necessary. The operator is responsible for tracking revisions and presenting 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 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 exemption. The FAA's UAS Integration Office may be contacted if questions arise regarding updates or revisions to the operating documents.

9. 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 essential flight personnel only and must remain at least 500 feet from all 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.

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

11. 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.

12. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. *PIC certification:* 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. *PIC qualifications:* The PIC must demonstrate the ability to safely operate the UAS in a manner consistent with how it will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles, and structures before conducting student training operations. Flights for the pilot's own training, proficiency, or experience-building under this exemption may be conducted under this exemption. PIC qualification flight hours and currency may be logged in a manner consistent with 14 CFR § 61.51(b), however, UAS pilots must not log this time in the same columns or categories as time accrued during manned flight. UAS flight time must not be recorded as part of total time.

15. *Training:* The operator may conduct training operations when the trainer/instructor is qualified as a PIC under this exemption and designated as PIC for the entire duration of the flight operation. Students/trainees are considered direct participants in the flight operation when manipulating the flight controls of a small UAS and are not required to hold any airman certificate. The student/trainees may be the manipulators of the controls; however, the PIC must directly supervise their conduct and the PIC must also have sufficient override capability to immediately take direct control of the small UAS and safely abort the operation if necessary, including taking any action necessary to

ensure safety of other aircraft as well as persons and property on the ground in the event of unsafe maneuvers and/or emergencies for example landing in an empty area away from people and property.

16. Under all situations, the PIC is responsible for the safety of the operation. The PIC is also responsible for meeting all applicable conditions and limitations as prescribed in this exemption and ATO-issued COA, and operating in accordance with the operating documents. All training operations must be conducted during dedicated training sessions and may or may not be for compensation or hire. The operation must be conducted with a dedicated VO who has no collateral duties and is not the PIC during the flight. The VO must maintain visual sight of the aircraft at all times during flight operations without distraction in accordance with the conditions and limitations below. Furthermore, the PIC must operate the UA not closer than 500 feet to any nonparticipating person without exception.

17. 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.

18. 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.

19. For tethered UAS operations, the tether line must have colored pennants or streamers attached at not more than 50 foot intervals beginning at 150 feet above the surface of the earth and visible from at least 1 mile. This requirement for pennants or streamers is not applicable when operating exclusively below the top of and within 250 feet of any structure, so long as the UA operation does not obscure the lighting of the structure.

20. For UAS operations where GPS signal is necessary to safely operate the UA, the PIC must immediately recover/land the UA upon loss of GPS signal.

21. If the PIC loses command or control link with the UA, the UA must follow a pre-determined route to either reestablish link or immediately recover or land.

22. The PIC must abort the flight operation if unpredicted circumstances or emergencies that could potentially degrade the safety of persons or property arise. The PIC must terminate flight operations without causing undue hazard to persons or property in the air or on the ground.

23. 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 5 minutes or with the reserve power recommended by the manufacturer if greater.

24. All aircraft operated in accordance with this exemption must be registered in accordance with 14 CFR part 47 or 48, and have identification markings in accordance with 14 CFR part 45, Subpart C or part 48.

25. 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.

26. The UA must remain clear of and give way to all manned aircraft at all times.

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

28. All flight operations must be conducted at least 500 feet from all persons, vessels, vehicles, and structures unless when operating:
    a. *Over or near people directly participating in the operation of the UAS.* People directly participating in the operation of the UAS include the student manipulating the controls, PIC, VO, and other consenting personnel that are directly participating in the safe operation of the UA.
    b. *Near but not over people directly participating in the intended purpose of the UAS operation.* People directly participating in the intended purpose of the UAS (including students in a class not manipulating the controls of the UAS), who must be briefed on the potential risks and acknowledge and consent to those risks. Operators must notify the local Flight Standards District Office (FSDO) with a plan of activities at least 72 hours prior to flight operations.
    c. *Near nonparticipating persons:* Except as provided in subsections (a) and (b) of this section, a UA may only be operated closer than 500 feet to a person when barriers or structures are present that sufficiently protect that person from the UA and/or debris or hazardous materials such as fuel or chemicals in the event of an accident. Under these conditions, the operator must ensure that the person remains under such protection for the duration of the operation. If a situation arises where the person leaves such protection and is within 500 feet of the UA, flight operations must cease immediately in a manner that does not cause undue hazard to persons.
    d. *Near vessels, vehicles, and structures*. Prior to conducting operations the operator must obtain permission from a person with the legal authority over any vessels, vehicles, or structures that will be within 500 feet of the UA during operations. The PIC must make a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

29. All operations shall be conducted over private or controlled-access property with permission from a person with legal authority to grant access. Permission will be obtained for each flight to be conducted.

30. 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 within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) in accordance with its UAS accident reporting requirements.

For operations conducted closer than 500 feet to people directly participating in the intended purpose of the operation, not protected by barriers, the following additional conditions and limitations apply:

31. The operator must have an operations manual that contains at least the following items, although it is not restricted to these items.
    a. Operator name, address, and telephone number.
    b. Distribution and Revision. Procedures for revising and distributing the operations manual to ensure that it is kept current. Revisions must comply with the applicable conditions and limitations in this exemption.
    c. Persons Authorized. Specify criteria for designating individuals as directly participating in the safe operation of the UAS. The operations manual must include procedures to ensure that all operations are conducted at distances from persons in accordance with the conditions and limitations of the exemption.
    d. Plan of Activities. The operations manual must include procedures for the submission of a written plan of activities.
    e. Permission to Operate. The operations manual shall specify requirements and procedures that the operator will use to obtain permission to operate over property or near vessels, vehicles, and structures in accordance with this exemption.
    f. Security. The manual must specify the method of security that will be used to ensure the safety of nonparticipating persons. This should also include procedures that will be used to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.
    g. Briefing of persons directly participating in the intended operation. Procedures must be included to brief personnel and participating persons on the risks involved, emergency procedures, and safeguards to be followed during the operation.
    h. Personnel directly participating in the safe operation of the UAS Minimum Requirements. In accordance with this exemption, the operator must specify the minimum requirements for all flight personnel in the operating manual. The PIC at a minimum will be required to meet the certification standards specified in this exemption.
    i. Communications. The operations manual must contain procedures to provide communications capability with participants during the operation. The operator

can use oral, visual, or radio communications as along as the participants are apprised of the current status of the operation.

j. Accident Notification. The operations manual must contain procedures for notification and reporting of accidents in accordance with this exemption.

In accordance with this exemption, the operating manual and all other operating documents must be accessible to the PIC during UAS operations.

32. At least 72 hours prior to operations, the operator must submit a written Plan of Activities to the local FSDO having jurisdiction over the proposed operating area.

The Plan of Activities must include at least the following:

a. Dates and times for all flights. For seasonal or long-term operations, this can include the beginning and end dates of the timeframe, the approximate frequency (e.g. daily, every weekend, etc.), and what times of the day operations will occur. A new plan of activities must be submitted prior to each season or period of operations.
b. Name and phone number of the on-site person responsible for the operation.
c. Make, model, and serial or FAA registration number of each UAS to be used.
d. Name and certificate number of each UAS PIC involved in the operations.
e. A statement that the operator has obtained permission from property owners. Upon request, the operator will make available a list of those who gave permission.
f. Signature of exemption holder or representative stating the plan is accurate.
g. A description of the flight activity, including maps or diagrams of the area over which operations will be conducted and the altitudes essential to accomplish the operation.

Unless otherwise specified in this 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, 48, 61, and 91.

This exemption terminates on August 31, 2018, unless sooner superseded or rescinded.

Sincerely,

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

Enclosure