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

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

July 1, 2015

Exemption No. 11975
Regulatory Docket No. FAA–2015–1204

Mr. Brian R. McArthur
Owner/CEO
TechJet, Inc
9309 Sesh Road
Clarence Center, NY 14032

Dear Mr. McArthur:

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 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of TechJet, Inc (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial 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 S1000+.

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, TechJet, Inc 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, TechJet, Inc 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 S1000+ 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 July 31, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

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U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590
Re: Exemption request pursuant to Section 333 of the FAA Reform Act
and specified parts under 14 CFR, the Federal Aviation Regulations

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 CFR Part 11.81, TechJet, Inc., an "operator" of Unmanned Aircraft Systems ("UASs or UAS") for aerial photography, hereby applies for an exemption from the Federal Aviation Regulations ("FARs") to allow commercial operation of its UAS platforms in the National Airspace System (NAS).

On or about April 09, 2015 the FAA granted exemptions to one hundred thirty-seven UAS operators. It is in good faith that this exemption request will follow the same outline of the exemptions granted for the same general intents and purposes to commercially operate UASs.

This application is submitted by:

Company: TechJet, Inc
Owner/CEO: Brian R. McArthur
Phone: 716-830-1021
Address: 9309 Sesh Rd
Clarence Center, NY 14032
Email: usjetservice@aol.com

The operator, TechJet Inc., is owned and run by an experienced Airline Transport Pilot, Certificated Flight Instructor, director of flight operations, and current PIC qualified Part 135 pilot. Furthermore, an additional employee is an experienced Airline Transport Pilot, current Certificated Flight Instructor, and current SIC qualified Past 135 pilot. Both have college degrees in aviation. They have the professionalism, the experience, the knowledge, the resources, and vested interests in conducting and maintaining safe UAS operations, as well as concern of the public's general welfare at large.

It is the intention of TechJet Inc. to receive the appropriate operating exemptions in order to engage in civil commercial and/or contracted governmental UAS operations for compensation or hire. UASs operated by TechJet, Inc. weigh less than 55 pounds, including all payload. They operate at speeds of less than 50 knots, can hover, and can simultaneously move in multiple

directions. TechJet, Inc. will only operate its UASs in line-of-sight (LOS) and with at least two FAA certificated pilot operators when applicable. Such operations will insure that the UAS will not create a hazard to users of the NAS and the general public.

The Unmanned Aircraft System

The UAS operated by TechJet, Inc. is a *DJI S1000+ Octo-rotor 3-axis gimbal GPS position-augmented* craft. Safety features include GPS "return to home" functions when and internal or external signal malfunction is detected. The pilot can also activate this "return to home" feature. The S1000+ has eight electric motors that are independently controlled by the craft. Safety redundancies include the ability for the UAS to have up to two non-adjacent motors fail and still allow the aircraft to be easily maneuverable to a safe area for landing.

Additional UAS craft added to the fleet will be notified to the FAA, if able and applicable.

Given the small size of our UASs and the restricted area that they will be operated, TechJet, Inc. UAS operations adhere to the Reform Act's safety requirements. Additionally, due to the size of the UASs and the limited area in which they will operate, approval of this application presents no national safety concerns. Based on the substantial level of safety surrounding the proposed operations, and the significant public benefit (enhanced safety.) Reduction in environmental impacts in the outdoor setting these UASs will operate leaving no trace of activity behind, the grant of the requested exemption is in the public interest. Accordingly, TechJet, Inc. respectfully requests that the FAA grant the requested exemption.

Aircraft and Equivalent Level of Safety

The operating limitations proposed by TechJet, Inc. provide for a higher level of safety because UAS operations further enhance safety of aerial photography operations over using conventional aircraft.

As set forth herein by TechJet, Inc., the limitations and conditions include:

- The UASs will weigh less than 55 pounds
- Flights will be operated within line of sight of a pilot and observer
- Airport owners and/or local air traffic control facilities will be contacted and notified if operations within the designated distance from that airport, pursuant to any conditions of COAs issued for commercial UAS flight activities
- Maximum flight time for each flight will be 30 minutes or at 25% of battery power reserve whichever comes first
- Flights will be operated at an altitude of no more than 400 feet AGL as indicated by onboard GPS system
- Minimum crew for each operation will consist of the UAS pilot, the observer and a camera operator
- A UAS pilot will be Pilot in Command (PIC)

- A UAS pilot will be an FAA certificated airman with at least a Private Pilot's certificate and at least a current third class Medical
- An established "Security Perimeter" for the flight operations area
- A briefing will be conducted for planned UAS operations prior to each flight
- All personnel performing duties within the boundaries of the safety perimeter are required to participate
- The operator will file a FAA Form 7711-1 or its equivalent, as modified in light of the requested exemption, with the appropriate Flight Standards District Office when applicable for the specified flight requiring a specific COA, above and beyond the blanket COA authorized by the FAA on March 23, 2015, once such blanket COA is issued to this operator
- The operator will attempt to verbally notify all persons involved in the filming and the operations, and ensure that they will stay no closer than the specified safety distance (vertical and lateral) of the flight operation, when applicable
- The operator will submit a written Plan of Activities to the FSDO at least 1 calendar day, including non-business days, before the proposed operations commence if operations require a specific COA when operations occur outside the blanket COA, unless the specific COA does not require the additional notification
- The Pilot and Observer must be trained in UAS operations and received current information on the particular UAS to be operated
- The Pilot and Observer will at all times be able to communicate by voice and may augment verbal communication by electrical means because of ambient noise levels if necessitated for safety and/or if deemed helpful to the safe operation of the UAS, as determined by the PIC
- Written and/or oral permission from the relevant property owners will be obtained.
- All required permissions and permits will be obtained from territorial, state, county, or city jurisdictions, including local law enforcement, fire, or other managing governmental agencies, if applicable
- If the UAS loses communications or loses its GPS signal, the UAS will and does have the capability to return to a pre-determined location within the Security Perimeter and land safely
- The UAS will have the capability to abort a flight in case of unpredicted obstacles or emergencies

Regulations from which the exemption is requested:

14 CFR 21	**14 CFR 91.103**	**14 CFR 91.205 (b)**
14 CFR 45.23(b)	**14 CFR 91.109**	**14 CFR 91.215**
14 CFR 45.27	**14 CFR 91.119**	**14 CFR 91.405 (a)**
14 CFR 45.29	**14 CFR 91.121**	**14 CFR 91.715**
14 CFR 61.113 (a) and (b)	**14 CFR 91.151 (a)**	**14 CFR 407 (a) (1)**
14 CFR 91.9 (b) (2)	**14 CFR 91.203 (a) and (b)**	**14 CFR 409 (a) (2)**
		14 CFR 417 (a) and (b)

Explanations of Requested Exemptions

14 C.F.R. 21: Certification Procedures for Products and Parts

This regulation is designed for manned aircraft. It is not suitable for off-the-shelf or production UAS. All parts come from the manufacturer. Substantive replacement parts (i.e. motors, propeller blades, radio transmitters, etc.) also come from the manufacturer or an authorized vendor with approved after-market components and will ensure correct equipment is used to replace substantive parts of the UAS craft.

14 C.F.R. 45.23(b): Display of Marks; general

Normally, a small decal or sticker label with non-standard alphanumeric markings (as mentioned in 14 CFR 45.29) should be able to be affixed the UAS in some location. However, if unable to affix some kind of label with the vehicle's registration number on it, other identifiable numbers will be used from the craft, such as manufacturer's serial number and/or a designated vehicle number from the operator, TechJet, Inc. that can be used to cross reference the UAS to the registration number as assigned by the FAA. A cross reference of said numbers will be documented by the operator and available in the operator's private records.

14 C.F.R. 45.27: Location of marks; nonfixed-wing aircraft

Specifically, §45.27(a) states that for Rotorcraft: *Each operator of a rotorcraft must display on that rotorcraft horizontally on both surfaces of the cabin, fuselage, boom, or tail the marks required by §45.23.* Because this is neither a passenger rotorcraft nor contains a cabin, book, or tail in the traditional sense, displaying any type of registration marking cannot be accomplished. Therefore, the next best location will be used to place the UAS aircraft registration number, This will be determined by the operator to ensure balance, mechanical motion, and radio/GPS signal reception is not hindered. As guidance, a typical ideal location may be the booms for the motor arms or the landing gear assembly.

14 C.F.R. 45.29: Size of Marks

There will be insufficient space to display aircraft registration numbers on this type of UAS and make it visible as required by this section. A smaller decal or sticker label with non-standard alphanumeric markings will be affixed to the UAS in some location in order to identify the craft.

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

Sections 61.113 (a) and (b) limit private pilots to non-commercial operations. Because the UAS will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety of current operations by requiring the PIC operating the aircraft to have a Private Pilot's certificate rather than a Commercial Pilot's certificate to operate a small UAS, even though civil commercial and/or contracted governmental UAS activities will receive monetary or other compensation for work performed. Unlike a conventional manned aircraft, a UAS is remotely controlled by a ground-based operator. The operational area is controlled and restricted, and all flights are planned and coordinated in advance. The level of safety exceeds that provided by a single individual holding a Commercial Pilot's certificate operating a conventional aircraft for hire. The risks associated with the use of a UAS are so diminished from the level of risk associated with commercial operations contemplated by part 61 allowing UAS use by a private pilot as PIC exceeds the present level of safety sought by 14 C.F.R. 61.113 (a) and (b).

14 C.F.R. 91.9: (b) (2)

The need to have an aircraft manual onboard does not apply. UAS aircraft information manuals will be kept by the operator.

14 C.F.R. 91.103: Prefight Action

Section 91.103 requires each pilot to preflight an aircraft before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be used, an exemption is requested. However, an equivalent level of safety will be provided using the manufacturer's recommended preflight procedures per the supplied information manual with the UAS craft, as well as other necessary preflight steps deemed advantageous to the safety of flight by the operator from gained experience that supplements the UAS information manual. The PIC will take further actions, including reviewing weather, flight battery requirements, radio control communication checks and interference considerations, landing and takeoff distances, the flight environment, airspace considerations, and aircraft performance data before each flight. Other risk management tools, such as the IMSAFE and PAVE models will be used a basis to determine flight readiness.

14 C.F.R. 91.109: Flight instruction; Simulated instrument flight and certain flight tests

At times, it will be necessary to certify and/or recertify other UAS operators in an instructional setting. There will be no persons onboard the UAS. Also, on the ground, only a single UAS transceiver controller will be monitored by the person giving instruction to the current UAS PIC receiving instruction and piloting the UAS craft.

14 C.F.R. 91.119: Minimum Safe Altitudes

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119 provides, in pertinent parts, that:

"Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes, (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, or structure." Because TechJet, Inc. requests authority to operate at altitudes only up to 400 feet AGL, an exemption is needed to allow such operations. The UAS will never operate higher than 400 feet AGL. It will, however, be operated in a restricted area within a Security Perimeter, where buildings and people will not be exposed to operations without their pre-obtained consent.

The equivalent level of safety will be achieved given the size, weight, and speed of the UAS as well as the location where it is operated. No flight will be taken without the permission of property owner(s) or local official(s), whichever is applicable. Because of the advance notice to the property owner(s) and/or participant(s) of the UAS activity, all affected individuals will be informed of the planned flight operations. Compared to the flight operations for manned aircraft and the lack of flammable fuel, any risk associated with the proposed UAS operations is far less than conventional aircraft operating at or below 500 feet AGL.

In addition, the low-altitude operations of the UAS will ensure separation between a UAS and conventional aircraft, adding to the safety aspect of this exemption.

14 C.F.R 91.121 Altimeter Settings

Section 91.121 requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "... to an elevation of the departure airport or an appropriate altimeter setting available before departure." As a UAS may not have a barometric altimeter, but instead a GPS altitude data, and an exemption is needed. An equivalent level of safety will be achieved by the operator, pursuant to a safety checklist, confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

14 C.F.R. 91.151 (a): Fuel Requirements for Flight in VFR Conditions

Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed, (1) During the day, to fly after that for at least 30 minutes..."

The battery powering the TechJet, Inc. UAS provides approximately 20 minutes of powered flight. Operations would be impossible to conduct in order to meet the 30-minute reserve requirement in 14 CFR 91.151. Given the limitations on the UAS's proposed flight area, its proposed flight time, and proposed operations within a predetermined location, 14 CFR 91.151 is

inapplicable. Furthermore, operating the UASs in a tightly controlled area where only people, property owners, and/or official representatives will be allowed, less than 30 minutes of reserve fuel does not endanger the type of risk that 91.151 was intended to address.

The owner/operator of TechJet Inc. affirms that safety can be achieved by limiting flights to end with a 25% battery reserve as indicated on the PIC's controller mounted monitor. This restriction would be more than adequate to return the UAS to its predetermined landing area.

14 C.F.R. 91.203 (a) and (b), and 91.715 Airworthiness Certificates

Section 91.203(a) prohibits, in pertinent parts, any person from operating a civil aircraft unless it has within it:

(1) an appropriate and current airworthiness certificate; and
(2) an effective U.S. registration certificate issued to its owner or, for operation within the United States, the second copy of the Aircraft Registration Application as provided for in § 47.31(c).

Section 91.203(b) prescribes, in pertinent parts, that no person may operate a civil aircraft unless the airworthiness certificate or a special flight authorization issued under § 91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.
A UAS has no certificate nor does it have a cockpit door. TechJet, Inc. is requesting an exemption from 91.203 (a) and (b), and also 91.715.

14 C.F.R. 91.205 (b): Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements

Section 91.205 pertains to cockpit instruments for manned aircraft occupied by at least one pilot. This is not applicable to UAS. However, to ensure an equivalent level of safety and information, transmitted telemetry will be sent to the PIC and displayed on a video screen indicating various parameters including, but not limited to, GPS altitude, GPS signal, battery power remaining, time in flight, UAS ground speed, etc.

14 C.F.R. 91.215: ATC transponder and altitude reporting equipment and use

The UAS craft will have insufficient useful load and power supply to operate a transponder. Furthermore, operations offered by the blanket COA will occur below ATC radar coverage. To ensure an equivalent level of safety, when operations exist near a public airport, the operator will notify the local airport or ATC facility to advise them of the operation. If operations exist in an area not covered by the blanket COA, then a specific COA for that operation will be obtained by the local FSDO and specific case-by-case coordination with ATC will be made for the UAS flight.

14 C.F.R. 91.405 (a) (1); 407 (a) (1); 409 (a) (2); 417 (a) and (b): Maintenance Inspections

These regulations require that an aircraft operator or owner shall "have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter…" and others shall inspect or maintain the aircraft in compliance with Part 43.

Given that these sections and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to TechJet, Inc. operations. Maintenance and inspections will be accomplished by the operator. An equivalent level of safety will be achieved because the UASs are limited in size, will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise, the UAS can land immediately and will be operating from no higher than 400 feet AGL. Specific design redundancies will allow the UAS to have two of eight non-adjacent motors fail and still be able to fly safely.

The operator will ensure that the UAS is in working order prior to flight, perform any required maintenance, and keep a log of any substantial, non-preventative maintenance performed. The operator is a person familiar with the UAS and capable to maintain it in an airworthy condition.

Summary for Publication

Pursuant to 14 CFR Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed: TechJet, Inc. seeks an exemption from the following rules:

14 CFR: §§ **21; 45.23(b); 45.27; 45.29; 61.113 (a) and (b); 91.9 (b) (2); 91.103; 91.109; 91.119; 91.121; 91.151 (a); 91.203 (a) and (b); 91.205 (b); 91.215; 91.405 (a); 91.715; 407 (a) (1); 409 (a) (2); 417 (a) and (b)**

…to commercially operate a small unmanned vehicle UAS less than 55 pounds in aerial photography operations. These exemptions should allow for a UAS to safely operate in the NAS where conventional aircraft regulations would be inapplicable.

As established by the UAS exemptions already granted by the FAA, allowing commercial operations of UAS in the aerial photography industry will enhance safety by reducing risk. Conventional aerial photography operations, using varying types of conventional aircraft, operate at low altitudes and present the risks associated with aircraft that weigh at least 2,000 pounds and upward, and which carry large amounts of varying types of aviation fuel. Such aircraft must also fly to and from the shoot location at speeds that can exceed 50 knots over non-Safety Perimeter areas. In contrast, a UAS weighing fewer than 55 pounds and powered by batteries eliminates virtually all of that risk, given the small size and lack of combustible fuel. The UAS is carried, and not flown, to a job site. In this regard, the UAS carries no passengers or crew and, therefore, will not expose them nor person and property on the ground to the risks associated with manned relocation flights.

The operation of UASs conducted in the strict conditions outlined within this exemption request provide at least an equivalent level of safety supporting the grant of the exemption requested herein. The UASs operate at slow speeds, close to the ground, and in a sterile environment. UASs also have far less impact on the environment compared to the conventional aerial photography practices it replaces. As a result, they are far safer than conventional operations conducted with aircraft including, but not limited to, turbine helicopters or small single-engine aircraft flying near the ground, property, and people.

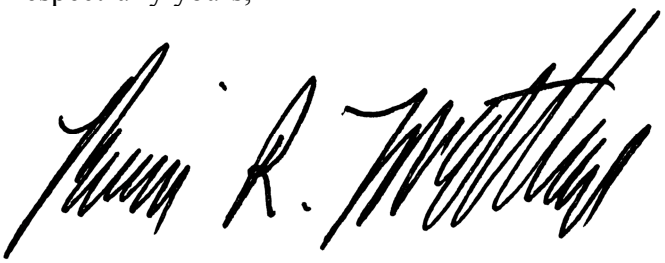
Satisfaction of the criteria provided in Section 333 of the FAA Modernization and Reform Act of 2012 (size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight and national security) provide more than adequate justification to grant TechJet, Inc. requested exemption, allowing for TechJet, Inc. UAS commercial operations.

Any future requirements issued by the FAA pertaining to operating UASs commercially (e.g. written test, logging flight time experience, etc.) will be complied with as it is understood this is a rapidly evolving sector of the aerospace industry with little regulatory affirmations as of yet.

Additionally, because of the geographic location of the operator, TechJet, Inc, it may be necessary to conducted business and commercial UAS operations in and/or over the country of Canada. Particularly, the natural wonder and tourist attraction of Niagara Falls and businesses with real estate in and near the city Niagara Falls, Ontario are examples of reasons why TechJet, Inc. would be operating outside the United States. Therefore, TechJet, Inc. finishes this exemption request with the consideration of 14 CFR 11.81 (h), allowing for commercial UAS operations with the need to "exercise the privileges of our exemption outside the United States" with the aforementioned reasons.

If you have any questions or need any additional information, please contact the undersigned at 716-830-1021 or usjetservice@aol.com.

Respectfully yours,



Brian R. McArthur
Owner, CEO
TechJet, Inc.