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

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

June 25, 2015

Exemption No. 11895
Regulatory Docket No. FAA–2015-1031

Mr. Matthew C. Ippolito
Chief Pilot
Turin Aviation Group
39450 South Ave - Hangar 200
Zephyrhills, FL 33542

Dear Mr. Ippolito:

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 15, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Turin Aviation Group (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct commercial and public service operations in the following sectors: power and pipeline patrol, precision agriculture, mining survey, railroad survey, education, research and development.

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 C-Astral Bramor gEO.

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, Turin Aviation Group 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

[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.

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, Turin Aviation Group 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 C-Astral Bramor gEO when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

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

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

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

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

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

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

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

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

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

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

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

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

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

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

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

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

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

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

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

Sincerely,

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

Enclosures

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
Washington, DC 20590

Re: Exemption Request Under Section 333 of the FAA Reform Act and Part 11 of 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 C.F.R. Part 11, Turin Aviation Group, seeks an exemption from Federal Aviation Regulations ("FARs") detailed below for the Bramor gEO Unmanned Aircraft System manufactured by C-Astral. The requested exemption would permit Turin Aviation Group's Bramor gEO, to conduct commercial and public service operations in the following sectors: power and pipeline patrol, precision agriculture, mining survey, railroad survey, education, research and development.

In addition to the commercial sector, Turin Aviation seeks to apply its unmanned system towards public survey programs supported by the state of Florida. The Bramor gEO would be used for public service in emergency response settings for electrical companies pre and post natural disasters. The system would be used in a public setting for the purpose of land, forestry, and water management surveying for the state of Florida under contract with Southwest Florida Water Management District.

Turin Aviation was founded in 2008 as a veteran owned company. Turin employs current qualified commercial pilots, aircraft maintenance technicians (A&P), avionics specialists, logisticians, fabrication specialists and imagery analysts. As a whole, Turin Aviation employees boasts decades of military and civilian experience in aviation, intelligence, security, and logistics. Turin Aviation has operated globally with manned and unmanned systems in the most demanding environments.

Regarding the UAS

Turin Aviation will employ the use of a fixed wing aircraft developed by C-Astral called the Bramor gEO. The Bramor gEO is a proven airframe with over 8000 hours of flight time. The system has flown in various environmental settings in every continent including the north and south poles. The system boasts an endurance of 2.5 hours with a maximum speed of 43 knots and a stall speed of 23 knots. The craft has a flying wing design of durable lightweight kevlar and carbon fiber material weighing 10lbs with a wing span of 7.5 feet. The system is launched by an elastic catapult and lands via parachute or on its belly. Fully autonomous in nature with

failsafe programming, the Bramor gEO removes the aspect of human error inherent in manned aircraft. The system uses an onboard camera to capture still images that are recovered post flight to generate maps and mosaic landscapes. The cameras used are electro-optical and multispectral in nature and produce a range of data from ortho-rectified images to digital elevation models and normalized vegetation indexes.

Compared to the maintenance required to keep a manned aircraft airworthy, inspections and maintenance are not as complicated. Regardless, Turin Aviation will follow the recommended maintenance procedures and practices of the manufacturer to keep the system in an airworthy condition. The system's inspections and maintenance will be adhered to as described in the manufacturers' maintenance and user manual.

Regarding the UAS PIC

Given Turin Aviation Group's (TAG) experience with manned aircraft, Turin Aviation requires the need to use FAA certificated pilots to operate our unmanned aircraft (UA) adding an additional level of safety. Turin Aviation requests that the PIC hold a FAA issued private pilot's license, a first class medical, and maintain their currency to operate the UA. All pilots will abide by the requirements set forth in 8900.1 CHG 351 Volume 16. All Turin Aviation PICs and Visual Observers (VO) will be instructed through the company's training program which will include how to operate the UA under Turin Aviation's Standard Operation Procedures (SOP). In addition, the pilot will operate the UA for at least 5 hours, completing 10 successful launches and recoveries. Upon successful completion of their training, the pilot will take a written and practical exam. If passed, the pilot will be certified to operate the UA as PIC for TAG.

Visual Observers will be required to hold a third class medical. They will assist the PIC in pre and post flight operation. This will include recovery and data collection from the recovered UA. The observer's primary role will be to serve as crew for the UA at all times in case the PIC loses visual line of sight of the aircraft. The VO will be required to undergo the same training program as the PIC. The VO will have a separate written and practical exam that must be passed before being certified as a VO.

The training program for both parties will consist of the following:

- System Assembly
- Elastic Catapult Operation and Maintenance
- Parachute Folding
- Control Station Operation
- Flight planning, flight operation and maneuvering
- Emergency Procedures
- Recovery Procedures
- Data Retrieval
- System Maintenance
- Disassembly
- Adherence to SOPs

Regarding Operation of the UA

The size, weight, and operating parameters of the Bramor gEO make it an ideal replacement for conventional manned aircraft for aerial survey. The aircraft carries no fuel and vastly reduces the risk to human life. Regardless, Turin Aviation will adhere to strict operational procedures to maintain the highest level of safety equal to or higher than those of manned aircraft performing the same function. Turin Aviation seeks to integrate the UA into the existing national airspace system by following stringent operating procedures and limitations, which will guarantee safety of flight. The following are the specific Standard Operating Procedures ensuring a safe execution of unmanned operations:

Operations will be conducted by at least a two man crew consisting of a PIC and at least one Visual Observer

PIC will be designated prior to daily operation of the UA

Operations will be conducted within visual line of sight to the PIC and VO

PIC and VO will be in voice range during operation of the UA

Operations will occur in Class G or Class E airspace on occasion

Operations will follow 14 C.F.R Part 91.155 weather minimums

Operations will not occur closer than 1 statue mile to any operational airfield

Proper written notification will be given to the FSDO 72 hours prior to operation as well as filing a NOTAM

Operations will be limited to 400ft AGL

Operations will not occur over populated areas

Turin Aviation will have permission from land owners prior to commercial flight

Operations will be conducted in day VFR conditions only

PIC RESPONSIBILITIES

Prior to daily operation the PIC will be responsible for preflight of the aircraft based on the approved checklist by the manufacturer consisting of but not limited to:

Visual inspection of the UA

Verification of proper software

Verification of fail safes in case abnormal operation

PIC will be responsible for familiarization with all available information regarding the operation of the UA to include weather, NOTAMs, obstructions and any other pertinent information regarding the operation area

Prior notification will be given to airfield operators or airfield control towers when operating within five statute miles of an airfield

Provide written notification to the local FSDO regarding operations within five miles to any airfield

PIC will conduct pre and post briefings to all mission essential personnel conducting flight operations

EMERGENCY OPERATIONS

The UA has preprogrammed responses for various emergency scenarios including loss of communication, loss of GPS, low battery, engine failure and recovery from unusual attitudes. Flight plans are built to mitigate risks prior to operation and allow for a successful controlled recovery of the aircraft.

In the event the UA loses communication with the control station, the UA will stop its normal operation and begins to loiter at its current position in an attempt to reacquire the signal. If the signal is not reacquired after a certain period of time, the aircraft will return to its predesignated landing point and autonomously land.

If the UA loses GPS signal, the UA will begin to loiter at its current position to reacquire its signal. If the signal is not acquired in a given amount of time, the aircraft will land at its current position via parachute. The UA carries a second independent GPS system. In the event of a loss of GPS signal, the recovery crew will be able to locate the UA using this system.

In the event of a low battery, the UA will automatically return to home where it will land. If the battery becomes critically low the UA will automatically deploy its parachute at its current position.

In the event of an engine failure or an unusual attitude, the UA will automatically deploy its parachute and land safely.

In the event of any in flight emergency, the PIC has the ability to terminate the flight operations immediately and deploy the parachute leading to a safe landing. The UA will then be inspected and will not return to service without proper authorization from maintenance personnel.

Pursuant to 14 C.F.R. § 11.81(e), Turin Aviation Group seeks exemption from the below mentioned regulations and provides reason as to why the exemption should be approved based on the level of safety at least equal to that of which the rules require.

14 C.F.R. Part 21 Subpart H – Airworthiness Certificates

Given the size of the UAS, the limited operating areas and procedures defined within the training and operations section, an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the "Reform Act" with consideration "of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UAS."

In the case of the Bramor gEO, an analysis of these criteria demonstrates operation without an airworthiness certificate, under the conditions proposed herein, will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) with an airworthiness certificate. The Bramor gEO weighs 10lbs fully loaded. It will not carry a pilot or passenger, will not carry flammable fuel, and will operate exclusively within an area pre-disclosed and in compliance with conditions set forth herein. Operations under this exemption will be tightly controlled and monitored by both the operator, pursuant to the conditions set forth above, and by local public safety requirements. The FAA will have advance notice of all operations through the filing of NOTAMs. Receipt of the prior permission of the land owner, the size of the aircraft, the lack of flammable fuel, and the fact that the aircraft is carried to the location and not flown there all establish the equivalent level of safety. The Bramor gEO construction with lightweight material provides at least an equivalent level of safety to that of such operations being conducted with conventional aircraft that would be orders-of-magnitude larger and would be carrying passengers, cargo, and flammable fuel.

14 C.F.R. § 45.23(b) – Aircraft Marking and Identification Requirements

The Bramor gEO has no entrance to the cabin, cockpit, or pilot station on which the word "Experimental" can be placed. Given the size of the UA, two-inch lettering will be impossible. The word "Experimental" will be placed on the forward fuselage in compliance with § 45.29(f). The equivalent level of safety will be achieved by having the UA marked on its forward fuselage as required by § 45.29(f) where the pilot, observer, and others working with the UAV will see the identification of the UA as "Experimental." Turin Aviation will ensure compliance with § 45.29(f) to meet the intent of the regulation by placing the word "experimental" on the fuselage of the UA.

14 C.F.R. 91.7(a) – Civil Aircraft Airworthiness

Currently there is no airworthiness certificate for the Bramor gEO. Daily pre and post flight inspections will be accomplished in accordance with the manufacturer's maintenance manual(s) and guidance. During flight, the PIC will adhere to § 91.7(b) and abort air operations immediately upon identification of an in-flight emergency. Any

maintenance performed will be conducted by certified maintenance technicians and/or the manufacturer themselves. By applying the prescribed operations, inspection and maintenance procedures within the operations section and operations manual, an equivalent level of safety will be achieved.

14 C.F.R. 91.103 – Preflight Action

A pre-flight mission brief must be attended by all crew members. The mission brief will contain weather and all flight information including emergency and abort procedures. Crew members will also be responsible for reading any NOTAMs or other procedural updates which may have impact to Standard Operating Procedures.

The exemption requested for this section is specifically addressed toward the requirements which do not apply to UA operations such as runways and air traffic control integration.

14 C.F.R. 91.119 (c) – Minimum Safe Altitudes

The Bramor gEO will never operate at higher than 400 feet AGL. Due to the fact that aerial survey work must be accomplished at relatively low altitudes and at altitudes less than 500 feet AGL, an exemption from Section 91.119(c) is needed. The equivalent level of safety will be achieved given the size, weight, speed, and material with which the Bramor gEO is built. Also, no flight will be conducted without the permission of the land owner. Given the advanced notice to the landowner, all affected individuals will be aware of the survey flights. Compared to aerial survey operations conducted with aircraft or rotorcraft weighing far more than 10lbs and carrying flammable fuel, any risk associated with these operations will be far less than those currently allowed with conventional aircraft operating at or below 500 feet AGL. Turin Aviation will geo-locate all hazards to aerial navigation during the flight planning stages to ensure operational safety.

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

Turin Aviation will operate its UA to no less than 15% remaining battery power to ensure safe landing and retrieval of the UA. This 15% buffer is greater than that of most single engine reciprocating manned aircraft and the ability to quickly and safely land the UA in non-traditional environments ensures at least an equal level of safety.

14 C.F.R. 91.405(a), 91.407(a)(1), 91.409(a)(2) and 91.417(a) & (b) – Maintenance Inspections

Due to the fact the Bramor gEO presently does not have an airworthiness certificate, these regulations cannot be complied with as written and therefore an exemption is necessary. Pre and Post and routine inspections (not to exceed 25 flight hours) and

maintenance will be conducted in accordance with the manufacturer's guidance as stated in the operations and maintenance manuals. In addition, Turin Aviation will maintain daily logs of pre and post flight inspections and have maintenance performed by certified technicians and/or the manufacturer themselves. All maintenance inspections will be documented in an airframe and powerplant log book. In the event maintenance is required, certified technicians will verify the air vehicle is in flight readiness status prior to releasing the aircraft to the PIC for use in operations.

Unscheduled maintenance will be accomplished in the event of a mechanical or structural failure during flight. Upon completion of unscheduled maintenance, documentation will recorded and to verify that the UA is once again ready for flight. The PIC will accept the level of risk associated with returning the UA to flight status. At no time will there be changes made to the UA which would impact the structural integrity of the airframe, the weight and balance or performance characteristics without the manufacturer making such changes and verifying the UA's air worthiness.

All inspection and maintenance documentation will be housed with the airframe. These actions meet the intent of the regulation this exemption is being requested for, resulting in the equivalent level of safety.

We are prepared to modify or amend any part of this request to satisfy the requirements of the Department of Transportation, Federal Aviation Administration, or any government referent. We look forward to working with your office. Please contact us at any time if you require additional information or clarification.

Very Respectfully,

Matthew C. Ippolito
Chief Pilot

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