



Administration

May 26, 2015

Exemption No. 11694 Regulatory Docket No. FAA–2015–0730

Ms. Tania Rocco Counsel for Accupoint, Inc. Lowis & Gellen LLP 16515 South 40th Street, Suite 143 Phoenix, AZ 85048

Dear Ms. Rocco:

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 March 18, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Accupoint, Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial mapping and quantitative volume analysis.

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.

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 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. 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, Accupoint, 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.

#### **Conditions and Limitations**

In this grant of exemption, Accupoint, 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: <a href="www.ntsb.gov">www.ntsb.gov</a>.

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 May 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan Director, Flight Standards Service



ATTORNEYS AT LAW

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www.lowis-gellen.com

March 18, 2015

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 from: 14 CFR 61.113 (a) and (b); 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).

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, Accupoint, Inc. ("Accupoint"), seeks an exemption from Federal Aviation Regulations ("FARs") to allow the commercial use of its UAS's for the purpose of aerial mapping and quantitative volume analysis.

On or about January 31, 2015 the FAA granted Exemption No. 11158 to Team 5, LLC which uses the same UAS as Accupoint, the DJI S1000 (S1000) although for different purposes. The S1000 is a stable lightweight battery operated octocopter.

By approving these exemptions, the FAA will allow a safe and risk adverse way to collect geo-spatial data without sending persons into potentially high-risk areas to collect measurements and/or using a manned aircraft which carries a much larger risk of injury and damage to persons and structures.

The name and contact information of the applicant is:

Accupoint, Inc. 1214 N. Stadem Dr. Tempe, AZ 85281

We are prepared to modify or amend any part of this request to satisfy the need for an equivalent level of safety. We look forward to working with your office. Please contact us at 480-219-5284 or via email trocco@lowis-gellen.com at any time if you require additional information or clarification.

# Thank you,

/s/ Tania Rocco

Of Counsel Tania Rocco 16515 S. 40th St. Phoenix, AZ 85048 Tel: 301.933.7216

Cell: 602.214.3490

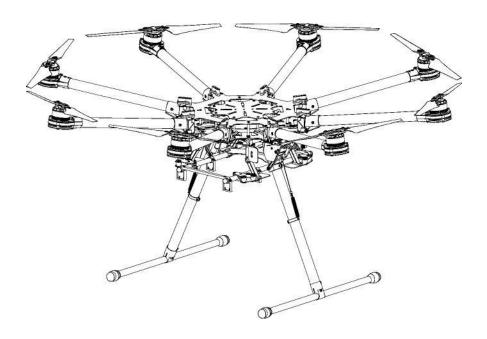
trocco@lowis-gellen.com

### **BASIS FOR PETITION**

## I. <u>UAS</u>

The S1000 has already been approved by the FAA to be used in aerial photography in exemption No. 11158. Accupoint intends to use multiple S1000s in a similar manner, but for different purposes. The S1000 is an octocopter with retractable landing gear. The aircraft is designed to be stable even with the loss of a rotor. The S1000 has a maximum thrust of 2.5kg. It weighs approximately 9.7 pounds and has a maximum takeoff weight is approximately 24 lbs. The S1000 uses a 6S LiPo battery that allows flight times in excess of 25 minutes. The S1000 has a maximum speed of 45 mph. It can hover and simultaneously move vertically and horizontally. The S1000 can operate in temperatures between -10 C to plus 40 C. The propeller is made out of high strength performance engineered plastics and is approximately 15 X5.2 inches. The S1000 is not water-proof and is prohibited from flying in the rain and snow.

Further, the S1000 is programmed to return to its launch site in the event of either communications failure, loss of the Global Positioning System (GPS), or low battery.



### II. Operations

Accupoint has a Flight Operations Manual ("FOPM") which is intended to provide an equivalent or higher level of safety for flight operations for the FAR's which Accupoint seeks exemption. Accupoint will provide a hard or electronic copy to each Pilot and Observer. The Pilot in Command ("PIC") will ensure that each flight is in compliance with the FOPM, DJI S1000 Operations Manual ("Operations Manual", which is electronically available at

http://www.dji.com/product/spreading-wings-s1000-plus/download), applicable FAR's and any conditions or limitations specified in grant of Exemption.

As set forth in the FOPM, some requirements, limitations and conditions include:

- Minimum crew for each operation will consist of a PIC and the Observer. The PIC may
  deem other crew essential to the safe operation of the aircraft to include: a camera
  operator, instructor, trainee, or other persons necessary for the safe operation of the flight.
- The PIC and Observer will be able to communicate verbally at all times.
- Flights will only be conducted during daylight hours.
- Visibility will be adequate to ensure that the PIC and/or Observer can maintain visual
  contact with the aircraft at all times and ensure that the aircraft will remain clear of
  obstructions and people.
- The aircraft will remain clear of clouds at all times.
- Flights will be operated within the line of sight of the PIC and/or Observer.
- Flights will not go beyond ¾ statute miles from point of intended landing.
- Flights will be terminated at or before 25% battery power reserve.
- Flights will not be conducted at speeds greater than 25 mph.
- Flights will operate at an altitude of no more than 400 feet AGL.
- Flights will remain in Class G airspace.
- Flights will not operate within 5 nautical miles of an airport or heliport unless a letter of agreement with the airport's management is obtained.
- Flights that fly over private or controlled-access property will be conducted with landowner's/controller's permission.
- Flights will not be operated over densely populated areas.
- The PIC will ensure that an adequate preflight inspection of the aircraft has been completed in accordance with the Operations Manual and the FOPM.
- The PIC will conduct a briefing before each flight with the Observer and any other essential crew as to the plan for the flight including: flight area, weather, potential obstacles and hazards, flight time, battery time and any other information affecting the safety of flight.

## **III.** Training and Qualifications

Each operation will be crewed with a minimum of a PIC and Observer. Required training and qualifications are outlined in the FOPM and include:

#### **PIC**

- The PIC will possess at least a private airman certificate and at least a third class medical certificate.
- The PIC will be proficient in flying the S1000 and have a minimum 25 hours flying a UAS, of which at least 5 hours will be in the S1000 flying in a manner consistent with how the S1000 will be operated under this exemption.

#### Observer

• The Observer is required to complete training as outlined in the FOPM.

## IV. FAR Relief Requested and Equivalent Level of Safety

- 61.113 (a) & (b) Private pilot privileges and limitations
- 91.7 (a) Civil aircraft airworthiness
- 91.119 (c) Minimum safe altitudes
- 91.121 Altimeter settings
- 91.151 (a)(1) Fuel requirements for flight in VFR conditions
- 91.405 (a) Maintenance required
- 91.407 (a)(1)Operation after maintenance, preventive maintenance, rebuilding, or alteration
- 91.409 (a)(1) and (2) Inspections
- 91.417 (a) and (b) Maintenance records

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

Sections 61.113 (a) and (b) limits private pilots to non-commercial operations. However, because the aircraft will not carry pilots or passengers and is limited in the type of operation and the area of operation, a private pilot can achieve the equivalent level of safety for the proposed operations as a commercial pilot. First, unlike a conventional manned aircraft, the aircraft is remotely controlled by a ground-based pilot operator in a controlled and restricted area. Second, the aircraft is much smaller than a manned aircraft that the level of risk associated with its' operation is diminished from the level of risk associated with commercial operations contemplated by part 61. Therefore, allowing aircraft use by a private pilot as the PIC meets or exceeds the present level of safety sought by 14 C.F.R. §61.113 (a) and (b).

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

Section 91.7(a) requires a civil aircraft to be in an airworthy condition for operation, which accordingly includes an airworthiness certificate in accordance with 14 CFR part 21, Subpart H. To maintain an equivalent level of safety, the PIC will ensure that the aircraft is in compliance with the Operating Manual and FOPM prior to each flight. Additionally, the Pilot will still comply with 91.7(b) and ensure that the aircraft is in condition for a safe flight.

#### 14 C.F.R. §91.119(c): Minimum Safe Altitudes

Section 91.119 (c) establishes safe altitudes for operation of civil aircraft over other than congested areas. Accupoint requests authority to operate at altitudes only up to 400 AGL over uncongested areas. The aircraft will operate in a limited area within pre-defined boundaries with the consent of the landowner/controller and require that all non-essential persons remain clear of

the flight area during operations. The PIC will make a safety assessment of the risk of operating the aircraft and ensure no undue hazard is present for persons or property. Considering the size, weight and speed of the aircraft, these protections will ensure the equivalent level of safety of minimum safe altitudes. Compared to flight operations for manned aircraft and the lack of flammable fuel, any risk associated with the proposed aircraft operations is far less than conventional aircraft operating at or below 500 AGL. In addition, the low-altitude operations of the aircraft will ensure separation with conventional aircraft.

#### 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 the elevation of the departure airport or an appropriate altimeter setting available before departure." The S1000 does not have a barometric altimeter, but instead uses GPS altitude data. Accupoint establishes an equivalent level of safety by requiring the Pilot to confirm that the GPS altitude is set to zero before every flight.

# 14 C.F.R. §91.151(a)(1): Fuel Requirements for Flight in VFR Conditions

Section 91.151(a)(1) requires all day VFR flights to operate with enough fuel to fly to first point of intended landing and then for at least an additional thirty minutes.

The battery powering Accupoint's aircraft provides approximately 25 minutes of powered flight and therefore is unable to meet this requirement. However, in accordance with the FOPM, flights will not go beyond ¾ mile of the intended landing point and will remain in line of sight at all times. The S1000 has a low battery function that automatically sends the aircraft back to its departure point and a critical battery function which automatically lands the aircraft. Also, because the aircraft will be flying in a confined area without the presence of non-essential persons and with landowner/controller permission, an equivalent level of safety can be achieved by flight planning all flights to return to intended landing site with a minimum of 25% reserve power in accordance with the FOPM.

### 14 C.F.R. §91.405 (a); 407 (a) (1); 409 (a)(1) & (2); 417(a) & (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 Accupoint operations. Maintenance will be accomplished by Accupoint in accordance with the Operations Manual and FOPM. The PIC will ensure that the aircraft is in working order prior to flight and will perform some maintenance and inspection of the aircraft and "be authorized to approve the aircraft for return to service." Additionally, the PIC will conduct detailed inspections of the aircraft after every 10 hours of flight. Maintenance performed by the PIC is limited to repairing small cracks, replacing a

propeller, and updating software and firmware. All other maintenance will be performed by the manufacturer.

Accupoint will keep a log of maintenance performed. Moreover, Accupoint and the PIC are most familiar with the aircraft and best suited to maintain it in an airworthy condition.

An equivalent level of safety will be achieved because the S1000 is limited in size, will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise, the aircraft can land immediately and will be operating from no higher than 400 feet AGL.

# IV. Privacy

There is little concern that the proposed flights will cause invasions of privacy because flights will occur over private or controlled access property with the land owner's prior consent and knowledge. In addition, as the overflight areas will be rural, there is little to no chance that there will be inhabited houses in the visual area or other people who have not consented to being filmed or otherwise agreed to be in the area where filming will take place.

# V. Public Interest

Use of the S1000 aircraft is in the public interest because it is safer for people and structures. Firs, risk to the flight crew is virtually eliminated by using an unmanned aircraft. Second, by flying a small aircraft weighing less than 25lbs and carrying no fuel, risk to the persons and structures on the ground is greatly reduced. Finally, use of the S1000 benefits the public because it is better for the environment through reduction in noise and environmental pollution.

### VI. Summary for Publication

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register:

Accupoint, Inc. seeks an exemption from the following rules: CFR 61.113 (a) and (b); 91.7(a), 91.9, 91.109, 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) to commercially operate a small unmanned vehicle for aerial mapping and quantitative volume analysis.

As established by the UAS exemptions already granted by the FAA, allowing commercial operations of UASs for aerial mapping will enhance safety by reducing risk. Conventional mapping and quantitative volume analysis using manned aircraft present avoidable risks to flight crew and persons and structures on the ground because the aircraft is flying at low

altitudes with large amounts of fuel. In contrast, a UAS weighing less than 25 lbs and powered by batteries eliminates virtually all of that risk given the small size and lack of combustible fuel. Environmental risks are also eliminated by using an aircraft that does not have emissions. Therefore, by using a UAS for the purposes outlined by Accupoint, the risk to persons and structures will be significantly reduced.

# VII. Conclusion

Accupoint requests a grant of exemption from the aforementioned FAR's. The exemption is in the public interest because it will increase safety for persons and structures and Accupoint will provide an equivalent or greater level of safety as provided for in the FAR's. If the exemption is granted, Accupoint can competently operate the aircraft in a safe manner.