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

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

August 20, 2015

Exemption No. 12536
Regulatory Docket No. FAA−2015−1500

Mr. Marcel Piet
ArgenTech Solutions, Inc.
16701 SE. McGillivray, Suite 210
Vancouver, WA 98683

Dear Mr. Piet:

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 letters dated April 21, 2015, and July 9, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of ArgenTech Solutions, Inc. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial inspection and monitoring of utilities, infrastructure, wildfire, and other emergency services.

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 3DRobotics Aero−M.

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[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, ArgenTech Solutions, 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, ArgenTech Solutions, 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 3DRobotics Aero−M 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 August 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

April 21, 2015

**Manager, Flight Standards Service**
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Federal Aviation Administration
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Washington, DC 20591

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

ArgenTech Solutions respectfully requests an exemption from several provisions of Title 14 of the Code of Federal Regulations (C.F.R.) to permit the use of small unmanned aerial systems (sUAS) to assist in the evaluation and inspection of Public Utilities, Infrastructure, Forest Fire monitoring, and Emergency Public Response. This request is motivated primarily by the desire to maximize safety during high-risk and hazardous operations, as well as assisting with public emergencies, and to mitigate any safety concerns associated with such operations. While an exemption would not eliminate the current need for in-person visual inspection and monitoring, it would allow ArgenTech Solutions to evaluate assets and infrastructure with sUAS, resulting in a safer and more efficient valuation of public utilities, infrastructure, wild fire monitoring and emergency public response.

## Company Profile

ArgenTech Solutions (AgTS) is a Veteran-Owned Small Business formed in March 2009 as a NH-based S-corporation. Our company's core competencies include providing Unmanned Aerial System (UAS) Field Service Representatives (FSRs) in support of Department of Defense (DoD), foreign governments, and civilian industry. AgTS is a professional aviation organization with significant experience in UAS operations, including: mission coordination/airspace deconfliction, UAS operations & maintenance, sensor applications, data compilation and analysis, and overall program safety.

AgTS has supported 182 deployments for DoD, with a combined total of 20,000 deployed operational days. As an aggregate, AgTS' 50 highly trained Field Service Representative's (FSR) have accumulated over 40,000 hours of experience as Pilot-in-Command (PIC), with over 13,000 UAS launches and recoveries for Group II and higher UAS. Our average FSR experience level is >950 hours PIC, >650 launches and recoveries.

NOTES:

ArgenTech Solutions, Inc.
*16701 SE McGillivray Suite 210*
*Vancouver, WA 98683*

- All information pertaining to the proposed system can be found in Appendix A (OEM manual).
- ArgenTech Solutions holds Unmanned Aircraft insurance with United States Aircraft Insurance Group (Policy Number SIHL1-142Y).
- ArgenTech Solutions intends to use the 3D Robotics Aero-M (The OEM Manual of which is attached as Appendix A) in its sUAS operations.
- ArgenTech intends to adopt ASTM F2500-07 Standard Practice for Unmanned Aircraft System (UAS) Visual Range Flight Operations (Attached as Appendix B) and ASTM F2909-14 Standard Practice for Maintenance and Continued Airworthiness of small Unmanned Aircraft Systems (Attached as Appendix C).

**Regulatory Provisions from which ArgenTech Solutions seeks an Exemption**

ArgenTech Solutions believes it will need an exemption from the following provisions to conduct the contemplated operations. In some instances, relief is needed because relief from another provision renders compliance with the regulation at hand not feasible.

14 C.F.R. §61.113(a) and (b)
14 C.F.R. §91.7(a)
14 C.F.R. §91.9(b)(2)
14 C.F.R. §91.109(a)
14 C.F.R. §91.119
14 C.F.R. §91.151
14 C.F.R. §91.203(a) and (b)
14 C.F.R. §91.405(a)
14 C.F.R. §91.407(a)
14 C.F.R. §91.409(a)

ArgenTech Solutions believes an exemption is only needed from the above-listed regulatory provisions. To the extent that the FAA believes that additional relief is required for ArgenTech Solutions to conduct the operations described here, we request an exemption from any such regulatory provisions as well.

**The Extent of Requested Relief and the Reasons Relief is Needed**

***14 C.F.R. §61.113(a) and (b)***

**§61.113 Private pilot privileges and limitations: Pilot in Command.**

(a) Except as provided in paragraphs (b) through (h) of this section, no person who holds a private pilot certificate may act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as pilot in command of an aircraft.

(b) A private pilot may, for compensation or hire, act as pilot in command of an aircraft in connection with any business or employment if:

(1) The flight is only incidental to that business or employment; and

(2) The aircraft does not carry passengers or property for compensation or hire.

ArgenTech Solutions' specially trained and certified employees will conduct the sUAS operations. While these individuals will have US FAA private pilot licenses, they will not hold commercial pilot licenses. The sUAS will not carry "property for compensation or hire" since they will be used solely to assist in evaluation and inspections of public utilities and infrastructure. Without an exemption, the pilot would be required to hold a commercial pilot certificate under §61.133. However, the risk associated with the contemplated operations is less than the risk posed by a traditional manned aircraft. The sUAS will fly at altitudes well below the permissible limits for other civil aircraft, eliminating the risk to other aircraft, and within a geographical envelope under the sole control of ArgenTech Solutions. Accordingly, the risk would be limited to ArgenTech personnel, who will be appropriately outfitted in safety gear. Requiring a commercial pilot certificate would provide no appreciable safety benefit and would needlessly impose additional costs on ArgenTech and its customers. Because the contemplated operations would not comply with §61.113(b)(1) and none of the other exceptions to paragraph (a) apply, relief is needed from both paragraphs (a) and (b).

***14 C.F.R. 91.7(a)***

**§91.7 Civil aircraft airworthiness**.

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when un-airworthy mechanical, electrical, or structural conditions occur.

There is no clear definition of "airworthy" as applied to the proposed sUAS, and the term has been defined in various ways depending on the applied circumstances. In all instances, it appears that the concept includes a requirement that the airplane 1) conforms to the aircraft's documented type design or its type certificate, as modified by supplemental type certificates and airworthiness directives, and 2) be in condition for safe operations. The sUAS will not have a type design or type certificate, as the FAA has not developed standards applicable to sUAS. As discussed later in this document, the types of operations contemplated by ArgenTech will not qualify the sUAS for an experimental airworthiness certificate. Accordingly, relief from §91.7(a) is requested. Should the FAA include airworthiness requirements as a condition of exercising the exemption, ArgenTech will assure the continued airworthiness of the sUAS. Regardless, ArgenTech believes that it can meet the requirements of §91.7(b), and is not requesting an exemption from that provision.

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

**§91.9 Civil aircraft flight manual, marking, and placard requirements.**

…

(b) No person may operate a U.S.-registered civil aircraft --

…

(2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter unless there is available in the aircraft a current, approved manual material, markings, and placards, or any combination thereof.

…

The sUAS comes with access to online manuals that provide instructions for the safe operation and maintenance of the aircraft. Compliance with this regulatory provision is not possible because this information has not been, and cannot be, approved by the FAA since there are no applicable standards established by the FAA against which to evaluate it. Additionally, the sUAS is too small to carry a printed manual. Since, by definition, there will never be a person aboard the sUAS, ArgenTech submits that there is no need to require the manual to be placed on the sUAS and an exemption is appropriate. Safety will be maintained by keeping the flight manual at the ground control point where the PIC will have immediate access to it. Since the sUAS cannot be operated without the Ground Control Station containing the manuals, there is minimal risk that the manuals will become separated from the sUAS, and ArgenTech will be able to immediately locate the manuals to effectuate any needed repairs on the sUAS detailed in the flight manual.

***14 C.F.R. 91.109***

**§91.109 Flight instruction; simulated instrument flight and certain flight tests.**

(a) No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls….

Small UASs, by their design, do not have fully functional dual controls. Flight control is accomplished through the use of a Ground Control Station that communicates with the aircraft via radio communications (C2 Link). Aircraft being considered for use by ArgenTech allows the UAS Instructor to place the aircraft into ‘loiter’ mode (fixed altitude stationary hold). In the event of the student losing control, the UAS Instructor can quickly and via alternate equipment (equipment not in the hands of the student) place the aircraft into a mode that then allows the instructor to bring the aircraft back into control and back to the pre-determined and/or safe landing location.

***14 C.F.R. 91.119***

**§91.119 Minimum safe altitudes: General.**

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, vehicle, or structure.

…

ArgenTech submits that the only relief it requires from §91.119 is from the minimum altitudes listed in paragraph (c). Relief is required from paragraph (c) for fixed wing operations because asset evaluation conducted at 500 feet or higher is insufficiently distinct to be meaningful. Since operations at this altitude also pose a heightened risk of collision with another aircraft, safety can only be assured through the grant of an exemption. The anticipated aircraft operations should be adequately addressed by paragraph (d) (1). Additionally, relief should not be needed from paragraph (a) because an emergency landing of the aircraft due to a power failure will not create an undue hazard to persons or property on the surface, as noted in the explanation of why an exemption will not adversely affect safety.

ArgenTech will have exclusive use of the land over which the sUAS will be operated, and public access is restricted. Controlled access to public utility land, structures or emergency response areas assure that no individuals unassociated with the planned operations are within the affected area of operations. ArgenTech personnel are required to wear mandatory safety equipment, including hard hats, safety glasses whenever dispatched to a work site. As such, the risk of injury is minimal. ArgenTech does not contemplate conducting operations over congested areas, so relief is not requested from paragraph (b).

***14 C.F.R. 91.151***

**§91.151 Fuel requirements for flight in VFR conditions.**

(a) No person may begin 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.

(b) No person may begin a flight in a rotorcraft 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, to fly after that for at least 20 minutes.

Operating the sUAS in a pre-defined area with less than 30 minutes of reserve fuel does not raise the type of risk contemplated by §91.151, i.e., that an aircraft could run out of fuel in the event it has to be flown to an alternate airport or circle the planned airport in the event of unanticipated conditions. ArgenTech does not intend to use the sUAS for point-to-point flights and will not operate the sUAS beyond visual line of sight. Nor will the sUAS require an airport in order to land. Rather, ArgenTech will operate the sUAS using pre-planned flight paths (taking into account weather conditions) designed to allow the sUAS to fly to the point of intended landing.

As such, there is no need for a time-based excess fuel requirement. Rather it should be sufficient to require only as much additional excess flight capacity as necessary to safely land the sUAS. We believe that a 20% energy reserve is more than sufficient to meet this objective.

***14 C.F.R. 91.203(a) and (b)***

**§ 91.203 Civil Aircraft: Certifications required.**

(a) Except as provided in §91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate. …

(2) An effective U.S. registration certificate issued to its owner or, for operations within the United States, the second copy of the Aircraft Registration Application as provided for in §47.31(c), or a registration certification issued under the laws of a foreign country.

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section 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.

…

The sUAS that ArgenTech intends to operate will not qualify for an airworthiness certificate unless the FAA chooses to issue them a restricted category certificate. This is because the sUAS do not meet the current conditions for either a standard airworthiness certificate or an experimental airworthiness certificate. Notably, under 14 C.F.R. §21.191,[8] experimental airworthiness certificates are only available for research and development, showing compliance with regulations, crew training, exhibitions, air racing, market surveys, operating amateur-built aircraft, operating primary kit-built aircraft and operating light-sport aircraft. Until such time as the FAA develops airworthiness standards applicable to sUAS for non-recreational and nonexperimental use, ArgenTech submits that the FAA should consider exemptions to the requirements of §91.203(a). The absence of such exemptions hinders the development of sUAS and applicable uniform standards since it is only through the development of the aircraft that the FAA can reliably evaluate them and determine appropriate design standards.

Section 333 of the Modernization Act authorizes the FAA to exempt aircraft from the requirement for an airworthiness certificate based on a consideration of the size, weight, speed, operational capability of the particular UAS, as well as its proximity to airports and populated areas. An analysis of these criteria demonstrates that the sUAS operated without an airworthiness certificate in the areas and under the conditions contemplated by ArgenTech will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the conditions proposed in this request. The sUAS is less than 55 lbs. fully loaded, carries neither a pilot nor passenger, and operates exclusively within a secured area as set out in the UAS Operating Manual (Appendix B). Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by the operator and observer. Operations will

be conducted in compliance with the FAA and with local public safety requirements to provide security for the area of operation. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the sUAS, due to its size, speed of operation, location of operation, lack of explosive materials and inability to carry a substantial external load.

If the FAA waives the requirements of paragraph (a) (1), then it is technically impossible to comply with paragraph (b), so an exemption is merited there as well.

***14 C.F.R. 91.405(a), 91.407(a) (1) and 14 C.F.R. 91.409(a)***

**§91.405 Maintenance required.**

Each owner or operator of an aircraft –

(a) 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;

…

**§91.407 Operation after maintenance, preventive maintenance, rebuilding, or alteration.**

(a) No person may operate any aircraft that has undergone maintenance, rebuilding, or alteration unless:

(1) It has been approved for return to service by a person authorized under §43.7 of this chapter;

…

**§91.409 Inspections.**

(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had

(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by §43.7 of this chapter; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

…

ArgenTech believes that an exemption from these three maintenance requirements is appropriate because the FAA has not developed maintenance standards for UAS that would allow an operator to meet the part 91 maintenance requirements. In particular, there are no individuals authorized by the FAA to approve a sUAS for return to service under §91.407(a) or to conduct the initial airworthiness and annual return to service inspections required by §91.409(a). ArgenTech will maintain the aircraft as instructed in the owner's manual and ASTM F2909(Attached as

Appendix C), where applicable, and will not operate the aircraft until it has reasonably determined that any needed repairs have been made. However, because of the technical impossibility of meeting the requirements of §§91.405(a), 407(a) and 409(a), we believe an exemption from these provisions is appropriate.

Please do not hesitate to contact me at the phone number or via the e-mail address provided above should you have any questions or concerns.

Respectfully,

Marcel Piet
President-UAS Services

603-836-0588 X122 | Cell: 207-651-3476
Email: mpiet@agts.us

ArgenTech Solutions, Inc.
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*Vancouver, WA 98683*

## Summary for Federal Register Publications

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register should the FAA determine that publication is needed.

*Petitioner:* ArgenTech Solutions

*Sections of 14 C.F.R. Affected:*

14 C.F.R. §61.113(a) and (b)
14 C.F.R. §91.7(a)
14 C.F.R. §91.9(b) (2)
14 C.F.R. §91.109(a)
14 C.F.R. §91.119
14 C.F.R. §91.151
14 C.F.R. §91.203(a) and (b)
14 C.F.R. §91.405(a)
14 C.F.R. §91.407(a)
14 C.F.R. §91.409(a)

*Description of Relief Sought:* Petitioner seeks relief from the requirements of 14 C.F.R. §§45.29, 61.113(a) & (b), 91.7(a), 91.9(b)(2), 91.119, 91.121(a), 91.151, 91.203(a) &(b), 91.405(a), 91.407(a) and 91.409(a) to conduct sUAS operations over privet and publicly owned or controlled land, solely during daylight hours, to assist in the safe evaluation and analysis of public utility's and infrastructure and operations. In general, sUAS operations are intended to be conducted in areas remote from both congested areas and airports. The nature of operations anticipated by ArgenTech requires that the sUAS be flown at relatively low altitudes. ArgenTech expects that in most instances, the sUAS will be flown less than 75 feet from the highest structure along the path of the sUAS and in no instances will be flown higher than 400 feet above the ground. Accordingly, the risk of interference with other aircraft is minimal.

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*Vancouver, WA 98683*

9 July, 2015

Brenda Robeson
Program Analyst, Airmen and
Airspace Rules Division
800 Independence Ave. SW
Washington, D.C. 20591

Dear Ms. Robeson

We are in receipt of your letter dated 26 June, 2015 notifying us of the FAA request for additional information required to process our request for exemption from several provisions of Title 14 of the Code of Federal Regulations (C.F.R.). In your letter you indicated we needed to provide: "The reasons why granting the request would be in the public interest: That is, how it would benefit the public as a whole." The section below provides the requested information. Also attached is our original request with the paragraphs below inserted to provide a complete document.

**Reason why granting the request would be in the public interest**

This exemption application is submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the NAS before completion of the rulemaking required under Section 332 under the same act. By granting an exemption the FAA will fulfill Congress' intent of allowing UAS to operate with significant safety precautions in low risk environments." See Exemption No. 11335, Regulatory Docket No. FAA–2014-1106, p.11

The use of small unmanned aircraft (sUAS) for infrastructure inspection can significantly reduce the risk to workers of falls while inspecting, surveying, or monitoring numerous projects. sUAS can inspect, photograph, and collect real time data in hard to get to areas that as of now require worker inspection. Falls are the leading source of workplace fatality and injury on construction sites accounting for 36% of total deaths according to OSHA statistics and a reduction of falls through the use sUAS for site imaging and inspection could save workers' lives, which is undoubtedly in the public interest. The petitioned aircraft is under the fifty-five pound threshold and carries no combustible material on board, as opposed to the much larger conventionally powered aircraft. Shifting to sUAS from other manned assets presents a marked safety increase for workers and the public. See similar approved Exemption No. 11335, Regulatory Docket No. FAA–2014-1106, p 11

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As stated “The FAA finds that a grant of exemption is in the public interest. The enhanced safety achieved using a 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.” See Exemption No. 11062, Regulatory Docket No. FAA–2014–0352, p. 22

Thank you for the notification and allowing us to provide the additional information. Should you have any further request for information, please feel free to contact me again.

Respectfully,

Marcel Piet

Marcel Piet
President-UAS Services
603-836-0588 X122 | Cell: 207-651-3476
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Manager, Flight Standards Service
Unmanned Aircraft Systems Integration Office
Federal Aviation Administration
800 Independence A venue, SW
Washington, DC 20591

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

ArgenTech Solutions respectfully requests an exemption from several provisions of Title 14 of the Code of Federal Regulations (C.F.R.) to permit the use of small unmanned aerial systems (sUAS) to assist in the evaluation and inspection of Public Utilities, Infrastructure, Forest Fire monitoring and Emergency Public Response. This request is motivated primarily by the desire to maximize safety during hazardous operations, as well as assisting with public emergencies and to mitigate any safety concerns associated with such operations. While an exemption would not eliminate the current need for in-person visual inspection and monitoring it would allow ArgenTech Solutions to evaluate assets and infrastructure with sUAS, resulting in a safer and more efficient valuation of public utilities, infrastructure, wild fire monitoring and emergency public response.

**Company Profile**

ArgenTech Solutions (AgTS) is a Veteran-Owned Small Business that was formed in March 2009 as a NH-based S-corporation. Our company core competencies include providing Unmanned Aerial System (UAS) Field Service Representatives (FSRs) in support of DoD and civilian industry. AgTS is a professional aviation organization with significant experience in UAV operation.

AgTS has supported 182 deployments with a combined total of 20,000 deployed days. As an aggregate, AgTS' 50 highly trained Field Service Representative's (FSR) have accumulated over 40,000 hours of experience as Pilot in Command (PIC) with over 13,000 UAS launches and recoveries for Group II and higher UAS. Our average FSR experience level is >950 hours PIC, >650 launches and recoveries.

NOTE:

All information pertaining to this system can be found in Appendix A (OEM manual).

ArgenTech Solutions hold's Unmanned Aircraft insurance with United States Aircraft Insurance Group (Policy Number SIHL1-142Y).

ArgenTech Solutions intends to use the 3DRobotics Aero-M (The OEM Manual of which is attached as Appendix A) in its sUAS operations.

ArgenTech intends to adopt
ASTM F2500-07 Standard Practice for Unmanned Aircraft System (UAS) Visual Range Flight Operations (Attached as Appendix B)
ASTM F2909-14 Standard Practice for Maintenance and Continued Airworthiness of small Unmanned Aircraft Systems (Attached as Appendix C).

**Reason why granting the request would be in the public interest**

This exemption application is submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the NAS before completion of the rulemaking required under Section 332 under the same act. By granting an exemption the FAA will fulfill Congress' intent of allowing UAS to operate with significant safety precautions in low risk environments." See Exemption No. 11335, Regulatory Docket No. FAA–2014-1106, p.11

The use of small unmanned aircraft (sUAS) for infrastructure inspection can significantly reduce the risk to workers of falls while inspecting, surveying, or monitoring numerous projects. sUAS can inspect, photograph, and collect real time data in hard to get to areas that as of now require worker inspection. Falls are the leading source of workplace fatality and injury on construction sites accounting for 36% of total deaths according to OSHA statistics and a reduction of falls through the use sUAS for site imaging and inspection could save workers' lives, which is undoubtedly in the public interest. The petitioned aircraft is under the fifty-five pound threshold and carries no combustible material on board, as opposed to the much larger conventionally powered aircraft. Shifting to sUAS from other manned assets presents a marked safety increase for workers and the public. See similar approved Exemption No. 11335, Regulatory Docket No. FAA–2014-1106, p 11

As stated "The FAA finds that a grant of exemption is in the public interest. The enhanced safety achieved using a 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." See Exemption No. 11062, Regulatory Docket No. FAA–2014–0352, p. 22

## Regulatory Provisions from which ArgenTech Solutions seeks an Exemption

ArgenTech Solutions believes it may need an exemption from the following provisions to conduct the contemplated operations. In some instances, relief is needed because relief from another provision renders compliance with the regulation at hand infeasible.

14 C.F.R. §61.113(a) and (b)
14 C.F.R. §91.7(a)
14 C.F.R. §91.9(b)(2)
14 C.F.R. §91.109(a)
14 C.F.R. §91.119
14 C.F.R. §91.151
14 C.F.R. §91.203(a) and (b)
14 C.F.R. §91.405(a)
14 C.F.R. §91.407(a)
14 C.F.R. §91.409(a)

ArgenTech Solutions believes an exemption is only needed from the above-listed regulatory provisions. To the extent that the FAA believes that additional relief is required for ArgenTech Solutions to conduct the operations described here, we request an exemption from any such regulatory provisions as well.

## The Extent of Requested Relief and the Reasons Relief is Needed

### *14 C.F.R. §61.113(a) and (b)*

**§61.113 Private pilot privileges and limitations: Pilot in command.**
(a) Except as provided in paragraphs (b) through (h) of this section, no person who holds a private pilot certificate may act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as pilot in command of an aircraft.
(b) A private pilot may, for compensation or hire, act as pilot in command of an aircraft in connection with any business or employment if:
(1) The flight is only incidental to that business or employment; and
(2) The aircraft does not carry passengers or property for compensation or hire.

ArgenTech Solutions specially trained employees will conduct the sUAS operations. While these individuals will have private pilot licenses, they will not hold commercial pilot licenses. The sUAS will not carry property for compensation or hire since they will be used solely to assist in evaluation and inspections of public utilities and infrastructure. Without an exemption, the pilot would be required to hold a commercial pilot certificate under §61.133. However, the risk associated with the contemplated operations is less than the risk posed by a traditional aircraft. The sUAS will fly at altitudes well below the permissible limits for other civil aircraft, eliminating the risk to other aircraft, and within a geographical envelope under the sole control of ArgenTech Solutions. Accordingly, the risk would be limited to ArgenTech personnel, who will be appropriately outfitted in safety gear. Requiring a commercial pilot certificate would provide no appreciable safety benefit and would needlessly impose additional cost on ArgenTech. Because the contemplated operations would not comply with §61.113(b)(1) and none of the other exceptions to paragraph (a) apply, relief is needed from both paragraphs (a) and (b).

***14 C.F.R. 91.7(a)***

> **§91.7 Civil aircraft airworthiness**.
> (a) No person may operate a civil aircraft unless it is in an airworthy condition.
> (b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when un-airworthy mechanical, electrical, or structural conditions occur.

There is no clear definition of "airworthy," and the term has been defined in various ways depending on the circumstances. In all instances, it appears that the concept includes a requirement that the airplane 1) conforms to the aircraft's type design or its type certificate, as modified by supplemental type certificates and airworthiness directives, and 2) be in condition for safe operations. The sUAS will not have a type design or type certificate, as the FAA has not developed standards applicable to sUAS. As discussed later in this document, the types of operations contemplated by ArgenTech will not qualify the sUAS for an experimental airworthiness certificate. Accordingly, relief from §91.7(a) is required. Should the FAA include airworthiness requirements as a condition of exercising the exemption, ArgenTech will assure the continued airworthiness of the sUAS. Regardless, ArgenTech believes that it can meet the requirements of §91.7(b) and is not requesting an exemption from that provision.

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

> **§91.9 Civil aircraft flight manual, marking, and placard requirements.**
> ***
> (b) No person may operate a U.S.-registered civil aircraft --

***
(2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter unless there is available in the aircraft a current, approved manual material, markings, and placards, or any combination thereof.
*****

The sUAS comes with access to online manuals that provide instructions for the safe operation and maintenance of the aircraft. Compliance with this regulatory provision is not possible because this information has not been, and cannot be, approved by the FAA since there are no applicable standards established by the FAA against which to evaluate it. Additionally, the sUAS is too small to carry a printed manual. Since, by definition, there will never be a person aboard the sUAS, ArgenTech submits that there is no need to require the manual to be placed on the sUAS and an exemption is appropriate. Safety will be maintained by keeping the flight manual at the ground control point where the PIC will have immediate access to it. Since the sUAS cannot be operated without the Ground Control Station containing the manuals, there is minimal risk that the manuals will become separated from the sUAS, and ArgenTech will be able to immediately locate the manuals to effectuate any needed repairs on the sUAS detailed in the flight manual.

***14 C.F.R. 91.109***

**§91.109 Flight instruction; simulated instrument flight and certain flight tests.**

(a) No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls….

Small UASs, by their design, do not have fully functional dual controls. Flight control is accomplished through the use of a Ground Control Station that communicates with the aircraft via radio communications (C2 Link). Aircraft being considered for use by ArgenTech allows the UAS Instructor to place the aircraft into 'loiter' mode (fixed altitude stationary hold). In the event of the student losing control, the UAS Instructor can quickly and via alternate equipment

(equipment not in the hands of the student) place the aircraft into a mode that then allows the instructor to bring the aircraft back into control and back to the pre-determined and/or safe landing location.

***14 C.F.R. 91.119***

**§91.119 Minimum safe altitudes: General.**

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, vehicle, or structure.
*****

ArgenTech submits that the only relief it requires from §91.119 is from the minimum altitudes listed in paragraph (c). Relief is required from paragraph (c) for fixed wing operations because asset evaluation conducted at 500 feet or higher is insufficiently distinct to be meaningful. Since operations at this altitude also pose a heightened risk of collision with another aircraft, safety can only be assured through the grant of an exemption. The anticipated aircraft operations should be adequately addressed by paragraph (d) (1). Additionally, relief should not be needed from paragraph (a) because an emergency landing of the aircraft due to a power failure will not create an undue hazard to persons or property on the surface. As noted in the explanation of why an exemption will not adversely affect safety,

ArgenTech will have exclusive use of the land over which the sUAS will be operated, and public access is restricted. Controlled access to public utility land, structures or emergency response areas assure that no individuals unassociated with the planned operations are within the affected area of operations. ArgenTech personnel are required to wear mandatory safety equipment, including hard hats, safety glasses whenever dispatched to a work site. As such, the risk of injury is minimal. ArgenTech does not contemplate conducting operations over congested areas, so relief is not requested from paragraph (b).

***14 C.F.R. 91.151***

**§91.151 Fuel requirements for flight in VFR conditions.**

(a) No person may begin 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.

(b) No person may begin a flight in a rotorcraft 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, to fly after that for at least 20 minutes.

Operating the sUAS in a pre-defined area with less than 30 minutes of reserve fuel does not raise the type of risk contemplated by §91.151, i.e., that an aircraft could run out of fuel in the event it has to be flown to an alternate airport or circle the planned airport in the event of unanticipated conditions. ArgenTech does not intend to use the sUAS for point-to-point flights and will not operate the sUAS beyond visual line of sight. Nor will the sUAS require an airport in order to land. Rather, ArgenTech will operate the sUAS using pre-planned flight paths (taking into account weather conditions) designed to allow the sUAS to fly to the point of intended landing. As such, there is no need for a time-based excess fuel requirement. Rather it should be sufficient to require only as much additional excess flight capacity as necessary to safely land the sUAS. We believe that a 20% energy reserve is more than sufficient to meet this objective.

***14 C.F.R. 91.203(a) and (b)***

**§ 91.203 Civil Aircraft: Certifications required.**
(a) Except as provided in §91.715, no person may operate a civil aircraft unless it has within it the following:
(1) An appropriate and current airworthiness certificate. ***
(2) An effective U.S. registration certificate issued to its owner or, for operations within the United States, the second copy of the Aircraft Registration Application as provided for in §47.31(c), or a registration certification issued under the laws of a foreign country.
(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section 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.
*****

The sUAS that ArgenTech intends to operate will not qualify for an airworthiness certificate unless the FAA chooses to issue them a restricted category certificate. This is because the sUAS do not meet the current conditions for either a standard airworthiness certificate or an experimental airworthiness certificate. Notably, under 14 C.F.R. §21.191,[8] experimental airworthiness certificates are only available for research and development, showing compliance with regulations, crew training, exhibitions, air racing, market surveys, operating amateur-built aircraft, operating primary kit-built aircraft and operating light-sport aircraft. Until such time as

the FAA develops airworthiness standards applicable to sUAS for non-recreational and nonexperimental use, ArgenTech submits that the FAA should consider exemptions to the requirements of §91.203(a). The absence of such exemptions hinders the development of sUAS and applicable uniform standards since it is only through the development of the aircraft that the FAA can reliably evaluate them and determine appropriate design standards.

Section 333 of the Modernization Act authorizes the FAA to exempt aircraft from the requirement for an airworthiness certificate based on a consideration of the size, weight, speed, operational capability of the particular UAS, as well as its proximity to airports and populated areas. An analysis of these criteria demonstrates that the sUAS operated without an airworthiness certificate in the areas and under the conditions contemplated by ArgenTech will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the conditions proposed in this request. The sUAS is less than 55 lbs. fully loaded, carries neither a pilot nor passenger, and operates exclusively within a secured area as set out in the UAS Operating Manual (Appendix B). Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by the operator and observer. Operations will be conducted in compliance with the FAA and with local public safety requirements to provide security for the area of operation. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the sUAS, due to its size, speed of operation, location of operation, lack of explosive materials and inability to carry a substantial external load.

If the FAA waives the requirements of paragraph (a) (1), then it is technically impossible to comply with paragraph (b), so an exemption is merited there as well.

***14 C.F.R. 91.405(a), 91.407(a) (1) and 14 C.F.R. 91.409(a)***

> **§91.405 Maintenance required.**
> Each owner or operator of an aircraft –
> (a) 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;
> *****
>
> **§91.407 Operation after maintenance, preventive maintenance, rebuilding, or alteration.**
> (a) No person may operate any aircraft that has undergone maintenance, rebuilding, or alteration unless –
> (1) It has been approved for return to service by a person authorized under §43.7 of this chapter;
> *****
>
> **§91.409 Inspections.**

(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had __

(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by §43.7 of this chapter; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

*****

ArgenTech believes that an exemption from these three maintenance requirements is appropriate because the FAA has not developed maintenance standards that would allow an operator to meet the part 91 maintenance requirements. In particular, there are no individuals authorized by the FAA to approve a sUAS for return to service under §91.407(a) or to conduct the initial airworthiness and annual return to service inspections required by §91.409(a). ArgenTech will maintain the aircraft as instructed in the owner's manual and ASTM F2909(Attached as Appendix C), where applicable, and will not operate the aircraft until it has reasonably determined that any needed repairs have been made. However, because of the technical impossibility of meeting the requirements of §§91.405(a), 407(a) and 409(a), we believe an exemption from these provisions
is appropriate.

Please do not hesitate to contact me at the phone number or via the e-mail address provided above should you have any questions or concerns.

Respectfully,

Marcel Piet
President-UAS Services

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## Summary for Federal Register Publication

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register should the FAA determine that publication is needed.

*Petitioner:* ArgenTech Solutions

*Sections of 14 C.F.R. Affected:*

14 C.F.R. §61.113(a) and (b)
14 C.F.R. §91.7(a)
14 C.F.R. §91.9(b) (2)
14 C.F.R. §91.109(a)
14 C.F.R. §91.119
14 C.F.R. §91.151
14 C.F.R. §91.203(a) and (b)
14 C.F.R. §91.405(a)
14 C.F.R. §91.407(a)
14 C.F.R. §91.409(a)

*Description of Relief Sought:* Petitioner seeks relief from the requirements of 14 C.F.R. §§45.29, 61.113(a) & (b), 91.7(a), 91.9(b)(2), 91.119, 91.121(a), 91.151, 91.203(a) &(b), 91.405(a), 91.407(a) and 91.409(a) to conduct sUAS operations over privet and publicly owned or controlled land, solely during daylight hours, to assist in the safe evaluation and analysis of public utility's and infrastructure and operations. In general, sUAS operations are intended to be conducted in areas remote from both congested areas and airports. The nature of operations anticipated by ArgenTech requires that the sUAS be flown at relatively low altitudes. ArgenTech expects that in most instances, the sUAS will be flown less than 75 feet from the highest structure along the path of the sUAS and in no instances will be flown higher than 400 feet above the ground. Accordingly, the risk of interference with other aircraft is minimal.

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