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

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

April 3, 2015

Exemption No. 11255
Regulatory Docket No. FAA−2014−0781

Mr. Eric Fay
President/COO
Aviation Unmanned
4125 Centurion Way, Suite 100
Addison, TX 75001

Dear Mr. Fay:

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.

The Basis for Our Decision

By letter dated September 29, 2014, you petitioned the Federal Aviation Administration (FAA) on behalf of Aviation Unmanned (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct power line inspections.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

Discussion of Public Comments:

A summary of the petition was published in the Federal Register on October 17, 2014, (79 FR 62509). Three comments were received. The Small UAV Coalition (Coalition) commented in support of the petition. The Air Line Pilots Association, International (ALPA) and the National Agricultural Aviation Association (NAAA) opposed it.

In support of the petition, the Coalition stated the petitioner has proposed to abide by stronger safety measures than hobby and modeler groups operating similar aircraft. The Coalition stated that it does not believe that heightened safety measures should be required for the petitioner simply because of the commercial nature of its operations. The Coalition urged the FAA to adopt an evaluation framework for UAS operations under Section 333 of Public Law 112–95 that weighs the relative safety issues and risks of UAS by class and operational circumstances, rather than adopting artificial distinctions among unmanned aerial vehicles based on commercial and noncommercial operations. The petitioner's UAS pose considerably less safety risk than larger UAS. The Coalition asserted that because UAS operations like the petitioner's pose minimal risk to safety, they should be subject to minimal and appropriate regulations.

The Coalition noted the FAA is to consider the seven factors[1] in Section 333 as a minimum. The Coalition stated the petition shows the FAA should consider factors other than those specified in Section 333, such as location, altitude of its UAS, and the restricted area in which the UAS will be operated. The Coalition maintained that the petitioner's proposed operations satisfy the seven factors in Section 333 and include several additional mitigating factors to ensure the safety and security of the proposed UAS operations. The Coalition emphasized the FAA must evaluate each factor within the context of the petitioner's proposed UAS operations.

The Coalition also commented that the FAA should grant relief from the requirement to hold an airman certificate. The Coalition further stated that if an airman certificate is required then, at a minimum the, FAA should provide an exception from the training and testing requirements in part 61 in favor of requirements pertinent to the aircraft and operation proposed. The Coalition also asserted that in section 333 Congress intended for the FAA to consider national security with respect to the operation as opposed to addressing it through pilot certification.

The FAA notes that, as discussed in the grant of exemption to Trimble Navigation Ltd. (Exemption No. 11110), neither section 333, nor the FAA's exemption authority[2] allows the FAA to exempt pilots from the statutory requirement to hold an airman certificate as prescribed in 49 USC § 44711.

The Coalition commented that a visual observer (VO) should not be required for all small UAS operations. The Coalition further asserted that the presence of one or more VOs may allow the UAS to be operated beyond visual line of sight (VLOS) of the pilot in command

[1] Section 333(b) of P.L. 112 95 states, in part: "In making the determination under subsection (a), the Secretary shall determine, at a minimum-- (1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; …"

[2] 49 USC § 44701(f)

(PIC) and that the petitioner's proposal to operate the unmanned aircraft (UA) within VLOS of the PIC *and/or* VO should be permitted.

The FAA notes that one of the determinations for operations under section 333 is operation within visual line of sight. The PIC must maintain VLOS while operating the UA. The FAA finds that a VO complements the PIC's capability to see and avoid other aircraft, including when the PIC may be momentarily attending to other flying tasks. The VO provides an additional level of operational safety.

ALPA expressed concern regarding several aspects of the petition. ALPA stated "there must be means both to ensure that the sUAS remains within the defined airspace and to ensure that the hazard of other aircraft intruding on the operation is mitigated."

The FAA believes the limitations under which the petitioner will operate (i.e. VLOS and at or below 400 feet above ground level (AGL)) are sufficient mitigations to this risk so that the operations will not adversely affect safety.

In regards to communications, ALPA stated the PIC and observer should be able to communicate by radio. ALPA stated voice communication with the pilot is a limited mitigation if both the pilot and observer are not able to maintain visual observation of both the aircraft and the area. NAAA stated UAS observers must be present and able to communicate with the operator from the most minimal distance possible. The conditions and limitations regarding PIC and VO communications address those concerns.

ALPA asserted the UAS's lithium polymer batteries have numerous associated fire and explosion hazards as outlined in DOT/FAA/AR−09/55, "Flammability Assessment of Lithium-Ion and Lithium-Ion Polymer Battery Cell Designed for Aircraft Power Usage (January 2010)," and that the safe carriage of the batteries and the mitigations in place for known risks should be addressed. The referenced study was primarily conducted to determine how certain battery cells react in a fire situation aboard manned airplanes. Given the size of the battery and the operating conditions of the UAS, the FAA concludes that the use of a lithium polymer battery will not pose an undue safety risk for the proposed operations.

ALPA commented that command and control (C2) link failures are one of the most common failures on a UAS, and that lost link mitigations should require safe modes to prevent fly-aways or other scenarios. The FAA has inserted conditions and limitations in this exemption to mitigate the risk associated with such failures.

ALPA argued that under § 91.7, UAS operators must operate to the same high level of safety as all other aircraft in the National Airspace System (NAS). Additionally, ALPA stated they oppose the attempt to avoid certifying the airworthiness of the sUAS in accordance with the provisions of § 91.203, § 91.205, § 91.207, and § 91.319.

ALPA also noted that the petitioner's proposed operations are for "compensation or hire," and therefore contends the pilot must hold at least a current FAA commercial pilot certificate with an appropriate category and class rating for the type of aircraft being flown, as well as specific and adequate training on the UAS make and model intended to be used. Similarly, ALPA asserted a current second-class airman medical certificate should be required. NAAA also commented on pilot qualification, stating—

> Just as manned aircraft pilots are required to undergo a rigorous training curriculum and show that they are fit to operate a commercial aircraft, so too must UAS operators. Holding a commercial certificate holds UAS operators to similar high standards as commercial aircraft operators and ensures they are aware of their responsibilities as commercial operators within the NAS. Medical requirements ensure they have the necessary visual and mental acuity to operate a commercial aircraft repeatedly over a sustained period of time.

The FAA has reviewed the knowledge and training requirements of sport, recreational, private and commercial certificates and concluded that a UAS PIC holding a minimum of a sport pilot certificate, and operating under this exemption, would not adversely affect operations in the NAS or present a hazard to persons or property on the ground. Additional discussion of the FAA's review is found in the FAA's Analysis section of this exemption.

ALPA noted the petitioner must specify a means to meet see and avoid requirements in § 91.113 given the absence of an onboard pilot. The FAA notes that all flights must be operated within VLOS of the PIC and VO.

ALPA expressed concern on whether the petitioner's UAS can comply with the aircraft light requirements for night operations in § 91.209, given its limited electric power. The petitioner indicates that night operations will not be conducted and this exemption limits operations to daytime only.

ALPA also expressed concern that the petitioner's request is not for a single specific operation or location, but for all operations of the same general type. ALPA stated that this results in a considerable increase in the FAA's oversight tasks. The FAA notes ALPA's concern and in order to minimize potential impact to the NAS, the FAA requires that each operator secure a Certificate of Waiver or Authorization (COA) which covers specific details of the petitioner's operation. The FAA recognizes that UAS integration will generate new NAS access demand and will review and adjust accordingly.

NAAA noted that its members operate in low-level airspace, and therefore clear low-level airspace is vital to the safety of these operators. NAAA stated that seeing and avoiding other aircraft and hazardous obstructions is the backbone for agricultural safety, and that agricultural pilots depend on pilots of other aircraft to perform their see-and-avoid functions to prevent collisions. NAAA believes UAS operations at low altitudes will increase the potential for collision with agricultural aircraft.

The FAA recognizes these concerns and has incorporated associated conditions and limitations into this exemption, including: (a) a Notice to Airmen (NOTAM) issued for all operations; (b) operations conducted within VLOS of the pilot in command (PIC) and the VO; and (c) the UAS PIC must always yield right-of-way to manned aircraft.

NAAA stated that FAA airworthiness certification should be a requirement for all unmanned aircraft to operate within the NAS. NAAA recommended UAS be equipped with ADS-B or similar identification and positioning systems, strobe lights, high-visibility markings and registration numbers. NAAA also recommended UAS be operated strictly within the line-of-sight of the ground controller, with the assistance of a VO and clear of any low-flying manned aircraft.

As discussed below, Section 333 of the FAA Modernization and Reform Act of 2012 authorizes the Secretary of Transportation to determine, considering a number of factors laid out in the statute, that an airworthiness certificate is not necessary for certain operations. The Secretary has made that determination in this case and therefore the aircraft operated by the petitioner will not need to be certificated by the FAA.

Airworthiness Certification

The UAS proposed by the petitioner are the Vanguard Defense Industries ShadowHawk and MLB Company Super Bat.

In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the relief from 14 CFR part 21, 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, Aviation Unmanned 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, Aviation Unmanned 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 Vanguard Defense Industries ShadowHawk and MLB Company Super Bat 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 Colombia, 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 April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

AVIATION UNMANNED

Request for Section 333 Exemption – Utilities

September 29, 2014

4125 Centurion Way, Suite 100 ▪ Addison, TX 75001 ▪ (972) 408-3601

September 29, 2014

The following letter constitutes an exemption Request under Section 333 of the FAA Modernization and Reform Act of 2012 for Aviation Unmanned to perform Utility inspections for Center Point Energy. The UAS systems that we will use and will be referenced in this document are the Vanguard Defense Industries ShadowHawk and the MLB Company Super Bat.

Point of Contact:
Eric Fay
Mobile: (702) 544-7371
Direct: (972) 360-3121
Eric@AviationUnmanned.com

Address:
4125 Centurion Way, Suite 100
Addison, Texas 75001

1. Specific sections of 14 CFR from which we seek exemptions.

   a) §61.3(a)(1): Requirement for certificates, ratings, and authorizations
      a. There are no ratings for UAS operators as of yet, so we would like to use our current FAA commercial certificates in lieu of the lack of UAS certificates.
   b) §61.13: Issuance of airman certificates, ratings, and authorizations
   c) §91.7: Civil aircraft airworthiness. No person may operate a civil aircraft unless it is an airworthy condition
      a. There are no certifications for the airworthiness of UAS to date, so we are looking to rely on our field maintenance training and schedule to ensure our aircraft are in an airworthy condition before all flights.
   d) §91.113: Right of Way rules (see and avoid)
      a. We will have observers out during flights, and to the maximum extent possible stay below 400' AGL and away from controlled airspace.
   e) §91.203(a)(1) & §91.203(a)(2): Civil Aircraft: Certifications Required
   f) §91.205(b): Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements
      a. Specifically items (5) and (7) through (17). We do not plan to fly at night initially.
   g) §91.207: Emergency locator transmitters
   h) §91.125: ATC transponder and altitude reporting equipment and use
      a. We do not currently have transponders on our aircraft but could install them if necessary.
   i) §91.319: Aircraft having experimental certificates: Operating limitations Specifically §91.319(e)

2. Extent of relief we seek and the reason we seek the relief

The request for these exemptions is for the use of our Unmanned Systems to provide utility companies with power line inspections in areas outside of Houston TX. These inspections would include right of way surveying, tower inspections for early detection of arcing, and post-disaster aerial support. We are working with Center Point Energy, one of Texas' largest utility corporations, to provide these services across their 5,000 square miles of energy lines west and north of Houston, TX (see Figure 1). Center Point is interested in the ability of UAS to investigate remote and/or inaccessible areas of power lines safely, as well as provide early identification of power interruptions and provide real time data to direct their personnel accurately in the event of a natural disaster.

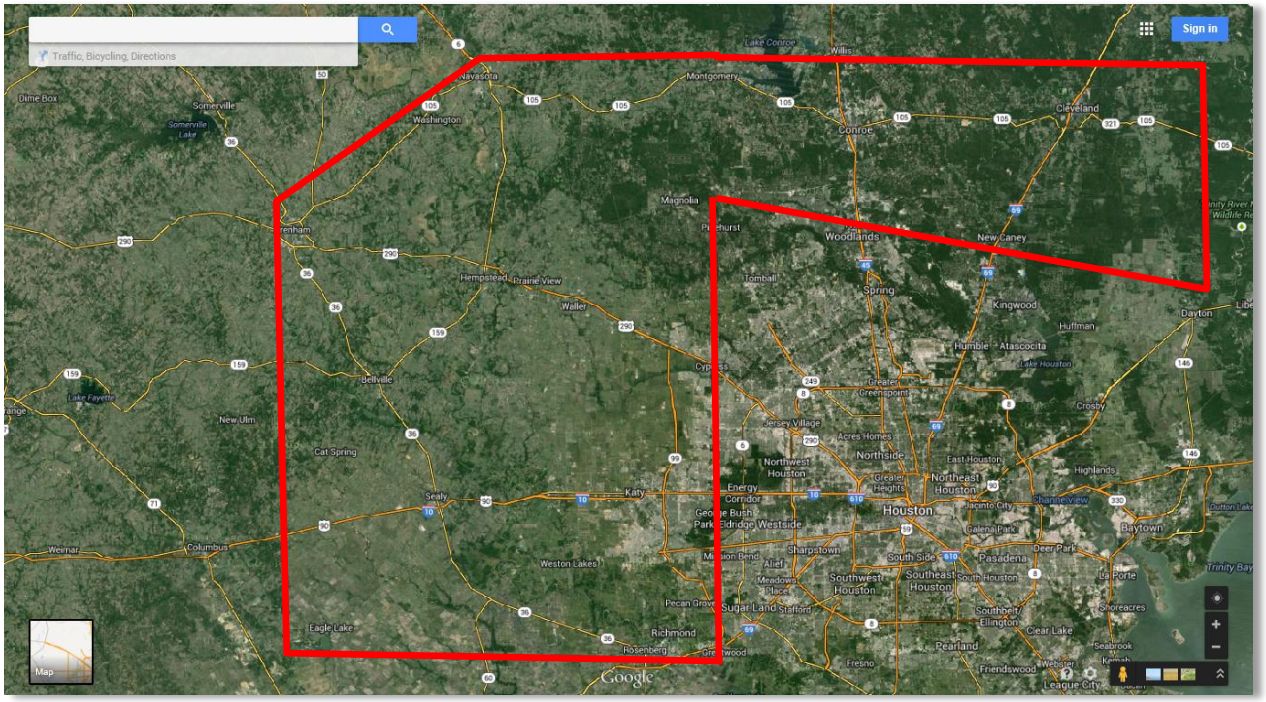


Figure 1: Requested area around Houston, TX

3. How our request would benefit the public as a whole

Routine Inspections

With the routine inspection of power lines (distribution or transmission), our Corona cameras can identify arcing early which will allow Center Point Energy to repair the affected area before they become a problem. This early identification will help Center Point maintain constant service to their customers, and allow the residents of Houston and the surrounding areas to keep their houses powered. Center Point has identified a need for this early detection in order to ensure their customers do not experience power interruptions.

Emergency Response

After Hurricane Ike in 2008, much of Houston and Galveston was without power for over 10 days. Center Point has learned many lessons from this event, one of which was that they didn't have accurate, real time information. They were sending thousands of personnel and trucks out to survey and repair areas that turned out to be not badly damaged, while other heavily damaged areas heavily were left undiscovered for days. In the event of another disaster such as this, or even one on a smaller scale, we would like to use our Unmanned Aircraft to assist Center Point with identifying the true problem areas which will allow them to focus their repair efforts accurately and significantly decrease the time to get power restored.

4. Reasons why the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to the existing rule

The majority of areas to be covered are remote, sparsely populated, and we thoroughly mission plan before each flight. We check current sectional charts for airspace restrictions, NOTAMS, TFR's, restricted airspace, and helicopter corridor charts. Our aircraft will be flown to the maximum extent possible below 400' AGL, outside of any controlled airspace and outside of 3 miles from any airport IAW §91.126(d), but at all times at a minimum safe altitude to allow for obstacle and terrain clearance. Should we need to fly closer than three miles from an airport we will establish and maintain radio communications with the controlling agency at any applicable airfields.

We have a robust safety observer program, and if required our aircraft can be monitored by Aviation Unmanned personnel who at a minimum possess FAA ground school certificates. Our safety observes have also undergone training and maintain constant two way radio communication with the PIC.

5. Summary to publish in the Federal Register

Aviation Unmanned seeks an exemption from regulations of 14 CFR to perform regular and emergency inspection services with Unmanned Aircraft on power lines. These inspections would take place in remote areas of South East Texas and the Louisiana Gulf Coast region.

6. Additional information, views, or arguments available to support our request

We have established standard operating procedures within our company to enable safe and effective use of our unmanned systems in any situation. Our operations and these standards are based on our extensive military flying experience in the MQ-1B and MQ-9 systems for nearly 18 years combined, and we comply with 14 CFR to the maximum extent possible. Furthermore, our operations are safe, efficient, and will ultimately show the public and FAA that operating UAS with the correct skillset is safe for commercial use.

Certifications and Training

- Our pilots all hold current FAA Commercial Pilot certificates and a minimum of FAA Second Class medicals.
- Many of our pilots hold CFI, MEI, and ATP certificates as well as current military qualifications on unmanned aircraft.
- Our pilots have completed rigorous training for the systems we operate including academics, simulators, and flight training. These courses, developed by Aviation Unmanned in conjunction with manufacturers, provide our pilots the best training possible to operate our systems. This also includes emergency procedure training and evaluation, experience building with a qualified instructor, and initial/recurring flight evaluations.

Currency and Proficiency

- Our pilots maintain currency and proficiency in accordance with a company specific Aircrew Proficiency Program. If crewmembers lapse on currency, they are not able to perform flying duties until completion of either (depending on how long they have been non-current): at least one flight with a qualified instructor or re-training and completion of a flight review by a qualified instructor.

Flight Operations

- Each flight is operated under the crew concept, and there are always two fully qualified pilots in the crew. The Pilot in Command is responsible for flying the aircraft and ensuring the safety of flight operations, the Second in Command is responsible for operating the payload and providing input to the PIC. In the event of PIC incapacitation the SIC can step in and safely land the aircraft.
- We abide by a "sterile cockpit" rule anytime one of the following three criteria are met:
    - Presets or Landing checklists have started
    - Altitude is less than 150' AGL or
    - Aircraft position is 0.25 nm or less from the ground control station.

Regulations Adherence

- Our crews are required to adhere to 14 CFR §91.17 (Alcohol or Drugs) and 14 CFR §121.471 (Flight time limitations and rest requirements: All flight crewmembers)

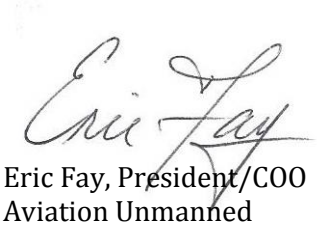
Aircraft

- The systems we will use to perform these inspections are proven, reliable systems.
- Our aircraft have detailed Lost Comm plans that, in the event of a loss of communication, will bring the aircraft back at a specific altitude, position, and airspeed.
    - We can set them to automatically land in a cleared area or hover over the cleared area while we work to get the communications back.
    - We always set the Lost Comm plan routing to avoid populated areas and major roads

7. Reasons why you want to exercise the privileges of our exemption outside the United States

We do not currently intend on exercising these privileges out of the United States.

Please feel free to contact me if there are any questions or issues regarding this request.



Eric Fay, President/COO
Aviation Unmanned