



August 10, 2015

Exemption No. 12404 Regulatory Docket No. FAA–2015–0552

Mr. Seth Gunsauls PJ Helicopters Inc. 903 Langley Way Red Bluff, CA 96080

Dear Mr. Gunsauls:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter posted to the docket on March 5, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of PJ Helicopters Inc. (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct utility tower and 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.

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 Carbon Core Cortex Quadcopter.

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<sup>1</sup>. 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, PJ Helicopters 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.

<sup>&</sup>lt;sup>1</sup> 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, PJ Helicopters 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 Carbon Core Cortex Quadcopter 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 5 minutes or with the reserve power recommended by the manufacturer if greater.
- 21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

- 22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N–Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.
- 23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.
- 24. The UA must remain clear and give way to all manned aviation operations and activities at all times.
- 25. The UAS may not be operated by the PIC from any moving device or vehicle.
- 26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
  - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
  - b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.
  - The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.
- 27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.
- 28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: <a href="www.ntsb.gov">www.ntsb.gov</a>.

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

- 29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.
- 30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
  - a. Dates and times for all flights;
  - b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
  - c. Name and phone number of the person responsible for the on-scene operation of the UAS;
  - d. Make, model, and serial or N-Number of UAS to be used;
  - e. Name and certificate number of UAS PICs involved in the aerial filming;
  - f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
  - g. Signature of exemption holder or representative; and
  - h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.
- 31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

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

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan Director, Flight Standards Service PJ Helicopters Inc.
Attn: Seth Gunsauls
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US Department of Transportation
Docket Management System
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RE: Exemption Request Pursuant to Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from: 14 CFR 61.3; 14 CFR 61.113(a) and (b); 14 CFR 91.7(a); 14 CFR 91.119(b) and (c); 14 CFR 91.121; 14 CFR 91.151(a)(1) and (b); 14 CFR 91.405(a); 14 CFR 91.407(a)(1); 14 CFR 91.409(a)(1) and (2); 14 CFR 91.417(a) and (b)

To Whom It May Concern,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012, PJ Helicopters Inc. (referred to as Petitioner), herby applies for and exemption from the listed Federal Aviation Regulations to allow operations of a commercial Unmanned Aircraft System (UAS). All proposed operations will be conducted under the conditions outlined in this petition or set forth by the FAA by Section 333.

## **Background:**

The Petitioner is a family-owned world class precision helicopter lift service serving all industries nationwide since 1971. In the over 40 year history PJ Helicopters has maintained a flawless safety record with ultimate customer satisfaction. PJ Helicopters has extensive experience in the construction and patrolling of Utility Lines and Towers. We have filed this petition for exemption to operate a UAS for Utility Tower and Line Inspections. We currently perform this service in our helicopters. By switching to a UAS for this specific application the Petitioner feels we can provide a safer more efficient way of carrying out the Utility Inspections. The lightweight UAS greatly reduces the potential for harm of participating and nonparticipating individuals as well as property on and around the worksite location.

## **Unmanned Aircraft System:**

The Petitioner is proposing to use the Carbon Core Cortex Quadrocopter for their UAS operations. The Cortex airframe is made of carbon fiber and weighs less than 10 pounds, completely assembled. The overall diameter of the Cortex is 1,200mm. The UAS will feature dual flight control redundancy capable of 256 waypoints, auto flight, auto land, hover lock, and return home features. The Cortex will have the battery capacity for up to 30 minutes of uninterrupted flight. The UAS will never be operated at a speed higher than 50 knots, and never higher than 400 ft. AGL. Before each flight the UAS will be updated with failsafe landing locations for the specific operation; should the link be lost during flight the UAS will return safely to the predetermined location and land. Given the size, speed of operation, lack of flammable and explosive liquids the Petitioner feels this would be a great asset to their operation and increase safety performance.

## **UAS Operator:**

Each operator who will be in control of a UAS will undergo training and safety procedures of the UAS. Each operator will accumulate 25 hours of total time before operating the UAS in any commercial setting. The staff employed by the Petitioner already has extensive knowledge of airmanship and weather forecasts which will translate easily to UAS operations. Recurrent training will be held by the Petitioner in order to assure that qualifications and skills are being met by all operators. Before each flight of the UAS the operator will be responsible for checking weather conditions and determining that safe operations may be conducted. The operator will also be responsible for determining the airworthiness of the UAS by conduction preflight inspections per the Original Equipment Manufacturer recommendations. If the preflight inspection, reveals any condition that may affect safe operations, the UAS will be grounded until proper maintenance and repairs have been made. All maintenance and alterations will be documented in the aircraft records.

## **Operating Parameters:**

The Petitioner has set forth the following parameters for UAS operations. The UAS shall always be inspected before conducting any operations. Only certified personnel with proper training may act as the UAS operator. The operator must be designated before the beginning any flight operations and cannot transfer that designation for the

duration of any flight. Visual Line of Sight must be maintained at all times by the operator. The UAS will not be operated any faster than 50 knots and shall never reach an altitude higher than 400 ft. AGL. The UAS shall not fly in wind conditions any greater than 20mph. Flight operations will always be conducted under VFR conditions. UAS operations will be conducted over Utility Property, or Utility Right of Way areas. The UAS will remain clear of and yield the right of way to all other manned vehicles.

The UAS will be integrated into the Petitioner's existing Standard Operating Procedures and Safety Management System. By doing this the Petitioner is confident that it will be able to operate the UAS while being able to maintain or exceed current levels of safety.

#### **Public Interest:**

The Petitioner is requesting to operate a UAS for Utility Line and Tower inspections. This is a required task to ensure utility lines are in good condition and functioning properly. The Petitioner currently conducts this task using a fleet of helicopters. The introduction of a UAS will greatly reduce the risk of these operations. The UAS carries no flammable fuel, or liquids that fixed-wing or rotorcraft do. The UAV has no internal pilot or passengers so the potential for human injury is greatly reduced. The UAS is also significantly quieter that any fixed wing or rotorcraft airframe, reducing the public disturbance during operations. With the size, operational speed, and weight limits of the UAS it is reasonable to say that operations carried out by the Petitioner will be at least as safe if not safer than any conventional aircraft performing the same duty.

# 14 CFR 61.3 Requirements for Certificates, Ratings, and Authorizations 14 CFR 61.113(a) and (b) Private Pilot Privileges and Limitations: Pilot in Command

The Petitioner asserts that since the UAS will not carry any pilot or passengers on board, the proposed operations will not adversely affect safety by requiring the operator in control of aircraft to have a private pilot or a commercial pilot certificate, as long as they have knowledge of airmanship and possess the skills to operate the UAS. In support of its position, the Petitioner argues that, since there are no standards for either private or commercial UAS pilot certificates, knowledge of airspace regulations and dexterity in the control and operation of the UAS acquired from actual operation of the aircraft will be the most important factors in establishing an equivalent level of safety. Through ground school and internal training the proper knowledge of airmanship can be achieved to maintain safe flight operations.

Furthermore, the Petitioner explains that, given the restricted and controlled airspace within which operations will take place, the key factors needed by the operator are knowledge of the airspace within which the operation will take place and how that airspace fits into the National Airspace System (NAS). The Petitioner also states that it cannot be assumed that a private pilot or commercial pilot, approved to operate a rotorcraft or fixed wing aircraft, has the skill or ability to safely operate an unmanned aerial system, operating at 400 ft. AGL or lower, within strictly controlled pre-approved airspace.

The Petitioner is confident that with the proper training and safety measures put in place it can effectively carryout it's proposed operations. Hands-on experience with the UAS is a far more effective guarantee of flight safety than a private pilot or commercial pilot certificate would be, until the FAA Pilot Certificate requirements catch up to the UAS technology.

The risks associated with the operation of the UAS (given its size, speed, operational capabilities, and lack of combustible fuel) are so diminished from the level of risk associated with private pilot operations or commercial operations contemplated by Part 61 with conventional aircraft (fixed wing or rotorcraft), that allowing operations of the UAS as set forth in this petition meets or exceeds the present level of safety.

It is unfeasible to state that a pilot with a certification (private or commercial) would be able to operate the UAS to a higher level of safety than a person who does not hold any pilot certificate, provided they have proper knowledge of airmanship, and are familiar with the UAS he or she is operating. Currently there is no training included in private pilot or commercial pilot certification process regarding UAS operations. An equivalent level of safety will be provided by allowing operation of the UAS without a private pilot's certificate or a commercial pilot's certificate, under the conditions set forth herein.

# 14 CFR 91.7(a) Civil Aircraft Airworthiness

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. Since there is no regulatory standard for determining airworthiness of a UAS, there will be no certificate issued. Therefore at this time regulation 91.7(a) is not applicable for UAS operations and an exemption is needed. However, the Petitioner will follow all safety and inspection procedures outlined by the

Original Equipment Manufacturer (OEM) to determine airworthiness. The operator will determine the airworthiness of the UAS by conducting preflight and post flight inspections. If at any time the operator determines the UAS not be airworthy it is to be grounded immediately until all proper repairs have been made. The UAS will undergo a test flight after any such repairs to ensure functionality before it is returned to commercial operations.

## 14 CFR 91.119(b) and (c) Minimum Safe Altitudes

The Petitioner's requested relief from14 CFR 91.119(b) and 14 CFR 91.119(c), as there will be times when the UAS will operate over congested area's to inspect utility towers or lines located on Utility Land or Utility Right of Way. Exemption from 91.119(b) will be needed to conduct operations. The regulation states, "Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 ft. above the highest obstacle within a horizontal radius of 2,000 ft. of the aircraft." With the UAS having an operation ceiling of 400 ft. 91.119(b) is not applicable for the Petitioner to conduct its proposed operations in compliance of this regulation. For the Petitioner working over congested areas is very common practice. The Petitioner is very aware of the consideration that is needed to safety during these types of operations. The operator will make a safety assessment of the risk of the operation under the proposed conditions and will determine that it does not present an undue hazard before flight operations are to begin. Prior to conducting UAS operations, all persons not essential to flight operations (nonparticipating persons) must remain at appropriate safe distances.

The Petitioner notes that because it requests to operate at altitudes only up to 400 ft. AGL, an exemption is needed from 14 CFR 91.119(c) to allow for such operations. As discussed in Exemption No. 11109 to Clayco, Inc. (Docket No. FAA-2014-0507), operations conducted closer than 500 feet to the ground may require that the UAS to be operated closer than 500 feet to essential persons, or objects that would not be possible without additional relief. Operations will always be conducted in an authorized, controlled area. Due to the specific operation proposed the UAS will at times be closer than 500 ft. to the operator, essential people, vehicles, and structures therefore exemption is needed from 91.119(c).

The Petitioner is confident that since it currently carries out the operations described in this document with rotorcraft, it will be able to at least maintain or exceed current safety levels by utilizing a UAS.

## 14 CFR 91.121 Altimeter Settings

The Petitioner is also requesting an exemption from regulation 91.121, as the UAS will have a GPS altitude readout instead of a barometric altimeter required by the regulation. The Petitioner and operator will achieve an equivalent level of safety via live flight data and preflight safety checklist set forth by OEM. The operator will confirm the altitude of the launch site shown on the GPS altitude indicator before flight in order to ensure accuracy.

## 14 CFR 91.151(a)(1) and (b) Fuel Requirements for flight in VFR Conditions

This regulation prohibits any person from beginning a flight in a fixed-wing aircraft under VFR conditions (with consideration of wind and forecast weather conditions) unless there is enough fuel to fly to the first point of intended landing and, assuming normal cruise speed – (1) During the day, to fly after that for at least another 30 minutes. Part B of this regulation describes operation requirements for rotorcraft.

The UAS has a battery that provides up to 30 minutes of powered flight. In order to comply with this regulation flight times would have to be limited to 10 minutes before the UAS would need to be grounded in order to maintain proper battery reserve as described in part 91.151. This limited flight time is not feasible and would make operations nearly, if not completely impossible. All operations will be conducted with a fully charged battery. Flight time will be limited to 30 minutes or when 25% battery life remains; whichever is to occur first. The operator will be able to monitor battery percentage thorough their flight controls. With the operator maintaining VLOS and with 25% battery remaining, there will be still be sufficient time to return the UAS to the planned operational landing zone. Therefore, the regulation is not applicable to the UAS, however the Petitioner will maintain its own safety standard as stated above.

# 14 CFR 91.405(a); 91.407(a)(1); 91.409(a)(1) and (2); 91.417(a) and (b) Maintenance Inspections and Records

The Petitioner is also requesting relief from maintenance and inspection requirements under 91.405(a) and (b), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a). An exemption should be granted under these sections because the UAS to be used is not a U.S. registered civil aircraft with an airworthiness certificate and therefore 14 CFR 91

regulations do not apply. Furthermore a designated official certified by the FAA to have maintenance signature authority does not currently exist for UAS operations. However, the Petitioner will employ a maintenance and quality assurance program which meets or exceeds applicable regulatory standards for U.S. registered aircraft. No operations will take place without inspections and maintenance items being completed. All inspections and maintenance action items will be documented in aircraft logs. The Petitioner further states that Original Equipment Manufacturer (OEM) requirements will be followed in the performance of maintenance, inspection and record keeping for the UAS.

The Petitioner states that the OEM defines the maintenance requirements for the unmanned aircraft and per those requirements, the Petitioner will ensure that it will conduct all inspections to precise OEM standards. Again, no flight operations will take place without required inspections and maintenance items being completed. Further, all inspections and maintenance action items will be documented in aircraft logs. The Petitioner will comply with the manufacturer's UAS component, maintenance, overhaul, replacement, inspection, and life limit requirements. The operator is responsible for a through preflight and post flight inspection of the UAS to ensure airworthiness. The inspection shall be conducted in accordance with the instructions outlined in the manufactures user's manual. When necessary only qualified OEM maintainers will perform higher level inspections and maintenance or overhaul per OEM standards.

# Review of Regulations seeking exemption from:

14 CFR 61.3
14 CFR 61.113(a) and (b)
14 CFR 91.7(a)
14 CFR 91.119(b) and (c)
14 CFR 91.121
14 CFR 91.151(a)(1) and (b)
14 CFR 91.405(a)
14 CFR 91.407(a)(1)
14 CFR 91.409(a)(1) and (2)
14 CFR 91.417(a) and (b)

## **Petitioner Closing Statement**

The Petitioner feels that with a grant of exemption it will be able to carry out Utility Inspections with a new level of unprecedented safety. Inspections are inherently dangerous, but with the attention to detail and safety procedures already put in place the Petitioner has been able provide excellent service year after year to its customers. Safety has always been a high priority here, and with a great SMS in place we strive hard to asses any potential risks or hazards and reduce the chance of injury or damage to any persons or property. Due to the size, weight, operational speed, and lack of flammable fuels in the UAS the potential for injury or damage is greatly reduced. This our ultimate goal, to provide a more efficient and safer operation. We invite you to please look at our website, www.pjhelicopters.com for further information regarding our company's operations.