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

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

April 22, 2015

Exemption No. 11414
Regulatory Docket No. FAA–2015–0198

Ms. Leisa Adkins
President
DRONESTHATWORK, LLC
240 Trumpet Drive
West Carrollton, OH 45449

Dear Ms. Adkins:

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 January 26, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of DRONESTHATWORK, LLC (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct aerial inspection of elevated structures for the electric utility industry.

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 an LB700 UAS.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection. 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, DRONESTHATWORK, LLC 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, DRONESTHATWORK, LLC 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 LB700 UAS 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 April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC

REGULATORY DOCKET NO. _____

IN THE MATTER OF THE PETITION FOR EXEMPTION OF:
DRONESTHATWORK,LLC
FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF
TITLE 14 OF THE CODE OF FEDERAL REGULATIONS
CONCERNING OPERATION OF UNMANNED AIRCRAFT SYSTEM
PURSUANT TO SECTION 333 OF THE
FAA MODERNIZATION AND REFORM ACT OF 2012

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

Re: Exemption Request

Dear Sir or Madam,

DRONESTHATWORK, LLC respectfully submits that the proposed operations detailed within this petition for exemption qualify for expedited approval under Section 333 of the Reform Act of 2012. The operations outlined herein, and in the Petitioner's manuals, clearly define UAS operations in the NAS that are under appropriately controlled conditions and within secure and sterile zones of operation. Further, the proposed operations pose no significant safety risk to persons or property on the ground, no risk to National Security, and would not constitute as an invasion of any persons reasonable expectation of privacy.

Submitted on January 26, 2015

Leisa Adkins, President
DRONESTHATWORK, LLC
240 Trumpet Drive
West Carrollton, Ohio 45449
Tel: (937)474-2790

TABLE OF CONTENTS

GLOSSARY OF ABBREVIATIONS

AGL	Above Ground Level
ATC	Air Traffic Control
COA	Certificate of Authorization
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FOMM	Flight Operations & Maintenance Manual
FSDO	Flight Standards District Office
JSA	Job Safety Analysis
NAS	National Airspace System
NERC	National American Electric Reliability Corporation
NTSB	National Transportation Safety Board
MOC	Management of Change
PIC	Pilot In Command
RF	Radio Frequency
Section 333	FAA Modernization and Reform Act of 2012, Section 333
UAS	Unmanned Aircraft System
VFR	Visual Flight Rules
VLOS	Visual Line-of-Sight
VMC	Visual Meteorological Conditions
VO	Visual Observer

SUMMARY

DRONESTHATWORK, LLC seeks exemption from the requirements of part 21, subpart H: part 27 and Sections 45.23(b), 61.113(a) and (B), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of 14 C.F.R.. This exemption would permit DRONESTHATWORK, LLC to operate the LB700 Unmanned Aircraft System ("UAS") for the special purpose of aerial inspection of elevated structures for the electric utility industry (or similar clients/uses) while always operating under the core premise that ALL aviation related accidents are preventable.

INTRODUCTION

DRONESTHATWORK, LLC's UAS Program is directed by one of the World's most skilled, safe and experienced small UAS pilots. Wendell J. Adkins has served as a Leader Member and Contest Director for the Academy of Model Aeronautics and, in addition, has represented the United States in the FAI-F3C Helicopter World Aeromodeling Championships, helping win a World Title for Team USA in 1993 in Velden Austria. Wendell has flown in 22 U.S. FAI-F3C Helicopter National Championships and has made approximately 15,000 unmanned sport aviation flights over the last 35 years, all without ever inflicting injury to any person or damaging the property of another. Wendell has also worked as a small UAS consultant to both Veridian Engineering/General Dynamics assisting with UAS sensor R&D projects and Northrop Grumman in support of Northrop's Beyond Line-of-Sight Tactical UAV Communications Relay Project.

BACKGROUND

Unmanned Aircraft System: LB700 Rotorcraft

DRONESTHATWORK, LLC seeks an exemption to operate the LB700 UAS, Serial #001, #002, etc., for compensation or hire within the national airspace ("NAS"). The LB700 UAS is comprised of a custom built, single rotor, lithium-polymer battery-powered unmanned aircraft system and portable ground control station. The LB700 UAS has a maximum gross weight of approximately twenty (20) pounds, while having a main rotor diameter of sixty-three (63) inches. The LB700 UAS derives its flight power from a single lithium-polymer battery-powered brushless electric motor and has a maximum airspeed of 50 knots.

NOTE: This request for exemption is in accordance with the proprietary procedures detailed in the Petitioner's FOMM document enclosed. The FOMM is submitted as confidential under 14 C.F.R. § 11.35(b), as the entire Manual contains confidential commercial information that the Petitioner has not and will not share with others. The FOMM contains operating conditions and procedures that are not available to the public and are protected from release under the Freedom of Information Act 5 U.S.C. § 552 *et.seq.*

BASIS FOR PETITION

Petitioner, DRONESTHATWORK, LLC, pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012, Section 333, *Special Rules for Certain Unmanned Aircraft Systems,* hereby formally petitions the Administrator for an exemption from the requirements of part 21, subpart H: part 27 and Sections 45.23(b), 61.113(a) and (B), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of 14 C.F.R..

The proposed operations detailed within this petition for exemption qualify for expedited approval under Section 333 of the Reform Act. The operations outlined herein, and in the Petitioner's manuals, clearly define UAS

operations in the NAS that are under appropriately controlled conditions and within secure and sterile zones of operation and pose no significant safety risk to persons or property on the ground, no risk to National Security, and would not constitute as an invasion of any persons reasonable expectation of privacy.

In accordance with 14 C.F.R. § 11.81, DRONESTHATWORK, LLC provides the following information in support of its petition for exemption:

A. Name and Address of The Petitioner.

The name and address of the Petitioner is:

DRONESTHATWORK, LLC
Leisa Adkins, President
240 Trumpet Drive
West Carrollton, Ohio 45449
Tel: (937) 474-2790
Email: boomstrike@aol.com

B. The Specific Sections of 14 C.F.R. Parts 21, 27, 45 and 91 From Which DRONESTHATWORK, LLC Seeks Exemption.

1. DRONESTHATWORK, LLC Seeks Exemption From The Requirement of Section 14 C.F.R. § 45.23(b) entitled *Display of marks; general,* states the following:

Section § 45.23 subsection (b), When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters no less than 2 inches nor more than 6 inched high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

2. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. § 61.113(a) & (b): Private Pilot Privileges and Limitations: Pilot in Command, states the following:

(a) no person who holds a private pilot certificate may act as pilot in command of any aircraft that is carrying passengers of 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.

3. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. § 91.7(a): Civil Aircraft Airworthiness which states the following:

(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 unairworthy mechanical, electrical, or structural conditions occur.

4. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. § Section 91.9 entitled *Civil aircraft flight manual, marking, and placard requirements, subsection (b) states the following:*

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

(1) For which an Airplane or Rotorcraft Flight Manual is required by § 21.15 of this chapter unless there is available in the aircraft a current, approved Airplane or Rotorcraft Flight Manual or the manual provided for in § 121l141(b); and

(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 Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

5. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.103 entitled Preflight Action, subsection (b)(1) states the following:

in pertinent part, that each pilot in command shall, before beginning a flight, become familiar with all available information concerning the flight, to include, "For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information:...For civil aircraft for which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing distance data is required, the takeoff and landing distance data contained therein."

6. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.109 entitled Flight Instruction; Simulated Instrument Flight and Certain Flight Tests, subsection (a) states the following:

No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functional dual controls. However, instrument flight instruction may be given in an airplane that is equipped with a single , functioning throwover control wheel that controls the elevator and ailerons, in place of fixed, dual controls, when -...

7. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.119 entitled Minimum Safe Altitudes: General, states the following:

in pertinent part, that 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.

8. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.121 entitled Altimeter Settings, subsection (a) states the following:

in pertinent part, that each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating -...

9. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.151(a) entitled Fuel Requirements For Flights in VFR Conditions, subsection (a) states the following:

(a) in pertinent part, that 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; or

(2) At night, to fly after that for at least 45 minutes.

10. DRONESTHATWORK, LLC Seeks Exemption From Section 91.203(a) and 91.203(b) entitled Civil Aircraft: Certifications Required, subsections (a) and (b) state the following:

(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. Each U.S. airworthiness certificate used to comply with this subparagraph (except a special flight permit, a copy of the applicable operations specifications issued under § 21.197(c) of this chapter, appropriate sections of the air carrier manual required by parts 121 and 135 of this chapter containing that portion of the operations specifications issued under § 21.197(c), or an authorization under § 91.611 must have on it the registration number assigned to the aircraft under part 47 of this chapter. However, the airworthiness certificate need not have on it an assigned special identification number before 10 days after the number is first affixed to the aircraft. A revised airworthiness certificate having on it an assigned special identification number, that has been affixed to an aircraft, may only be obtained upon application to an FAA Flight Standards District Office ("FSDO").

(2) An effective U.S. registration certificate issued to its owner or, for operation 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 in the cabin or cockpit entrance so it is legible to passengers and crew.

11. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.405(a) entitled Maintenance, Preventive Maintenance, Alterations, subsection (a) states the following:

in pertinent part, that an aircraft operator or owner shall have the aircraft inspected as prescribed in subpart E of the same part and shall, between required inspections, except as provided in paragraph (c) of the same section, have discrepancies repaired as prescribed in Part 43 of the chapter.

12. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.407(a)(1) entitled Operation after Maintenance, preventive maintenance, rebuilding, or alteration, subsection (a) (1) states the following:

in pertinent part, any person from operating an aircraft that has undergone maintenance unless it has been approved for return to service by a person authorized under § 43.7 of the same chapter.

13. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.409(a)(2) entitled Inspections, subsection (a)(2) states the following:

in pertinent part, that no person may operate an aircraft unless, within the preceding 12 calendar months, it has had an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

14. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 21. Section 91.417(a) and (b) entitled Maintenance Records, subsections (a) and (b) state the following:

(a) Each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include - (i) A description (or reference data acceptable to the Administrator) of the work performed: and (ii) The date of completion of the work performed; and (iii) The signature, and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information:

(i) The total time in service of the airframe, each engine, each propeller, and each rotor.

(ii) The current status of life limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives (AD) and safety directives including, for each, the method of compliance, the AD or safety directive number and revisions date. If the AD or safety directive involves recurring action, the time and date when the next action is required.

(vi) Copies of the forms prescribed by § 43.9(d) of the chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances. (b) The owner or operator shall retain the following records for the periods prescribed:

(1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(3) A list of defects furnished to a registered owner or operator under § 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

15. DRONESTHATWORK, LLC Seeks Exemption From 14 C.F.R. Part 27 entitled Airworthiness Standards for Normal Category Rotorcraft, states the following:

(a) This part prescribes airworthiness standards for the issue of type certificates, and changes to those certificates, for normal category rotorcraft with maximum weights of 7,000 pounds or less and nine or less passenger seats.

C. The Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks The Relief.

1. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From 14 C.F.R. § 45.23(b).

Relief is requested because the LB700 UAV has no entrance to the cabin, cockpit, or pilot station on which the word "Experimental" can be placed. Further, two inch lettering would adversely affect the flight performance and safe operation of the UAV.

Equivalent Level of Safety

An equivalent level of safety will be assured by having the LB700 UAS marked "Experimental" along each side of the camera gimbal upper tube support structure in lettering as large as practicable which will prominently inform all parties of the unmanned aircraft's overall operating status.

2. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section 14 C.F.R. § 61.113(a) & (b): Private Pilot Privileges and Limitations: Pilot in Command.

Relief is requested because it is recognized that a certificated commercial pilot is required to meet statutory requirements to operate any aircraft in the NAS for commercial purposes or a private pilot certificate if "the flight is only incidental to the business or employment." Since the UAS is essential to performing the function of inspection of elevated structures, this exception does not apply. Accordingly, this petition seeks exemptions from the limitations of both § 61.113(a) & (b) in order that the LB700 UAS may be utilized for compensation and for hire when operated by a certificated private pilot.

Equivalent Level of Safety

An equivalent level of safety will be assured by having the UAS operator hold a current private pilot's certificate when acting as PIC. Because the UAS carries no pilot or passengers, the proposed operations can achieve the equivalent level of safety intended by § 61.113(a) & (b) when operating as specified in the petitioner's FOMM. The FOMM sets forth procedures to secure the area of flight operations such that no nonessential personnel may enter the exclusion zone while flights are being conducted.

3. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.7(a).

Relief is requested because the LB700 UAS will not be issued a valid airworthiness certificate under this exemption request.

Equivalent Level of Safety

An equivalent level of safety will be assured by performing inspections and maintenance in accordance with the procedures detailed in the petitioner's FOMM. The DRONESTHATWORK, LLC lead pilot has 35 years of experience building and maintaining fundamentally similar unmanned aircraft as well as 4 years of maintenance records specifically for the LB700 UAS.

4. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.9(b).

Relief is requested because the LB700 UAS weighs approximately twenty (20) pounds at is maximum gross weight and cannot carry the approved Rotorcraft Flight Manual onboard. Furthermore, since the LB700 UAS is unmanned, the flight crew members are located at the ground control station.

Equivalent Level of Safety

An equivalent level of safety will be assured by making the petitioner's approved FOMM available at the ground control station, where it is immediately available for reference by the flight crew any time the LB700 UAS is being operated.

The approved FOMM will be made available within 7 days to any FAA, U.S. Department of Defense, Department of Homeland Security, or law enforcement official upon request.

5. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.103 entitled Preflight Action.

Relief is requested because the information that the PIC is required to review prior to flight operations, such as runway lengths and takeoff and landing distance data, do not apply to the operation of the LB700 UAS unmanned rotorcraft. Further, the FOMM will not be kept on board the aircraft as noted in the petitioners request for relief from Section § 91.9(b) above.

Equivalent Level of Safety

An equivalent level of safety will be assured through strict adherence to the extensive preflight checklist detailed in the petitioner's FOMM. The PIC is responsible for performing all inspections and taking all actions required to assure that both the UAS and the operating environment are suitable for safe operations prior to launch.

6. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.109 entitled Flight Instruction.

Relief is requested because the LB700 is a remotely piloted unmanned rotorcraft and, as such, is not equipped with fully functional dual controls on board and carries no pilot or passengers. The UAS is instead operated by the PIC via a single RF command and control transmitter.

Equivalent Level of Safety

An equivalent level of safety will be assured through providing flight instruction using ground based master/slave RF command and control transmitters and performing training flights in a secure and sterile environment at least 500 feet away from any nonessential, non-participating personnel.

7. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.119 entitled Minimum Safe Altitudes:

Relief is requested because the primary purpose and advantage of the LB700 UAS is to perform close proximity inspections of elevated structures that cannot otherwise be safely accomplished using manned aircraft without risking damage to either the structure and/or the manned aircraft. The UAS will typically be positioned at a horizontal distance of approximately 25 feet from the structure being inspected, and so, will be typically operating closer than 500 feet from the structure being inspected and, as such, will require an exemption to this requirement.

Equivalent Level of Safety

An equivalent level of safety will be assured due to the absence of flammable fuel, along with the inherent small size, weight and limited potential kinetic energy of the LB700 UAS. Utilization of a UAS for the purpose of close proximity structural inspections poses minimal risk of damage to the structures being inspected and other equipment on the ground surrounding the area of operations. In addition, strict adherence to the secure and sterile exclusion zone of operations, along with the collision avoidance procedures detailed in the petitioner's FOMM, assure that risk to persons and property on the ground are minimized.

As detailed in the petitioner's FOMM, flight operations will only be conducted on properties with written approval of the owner and/or authorized governing body. Considering the LB700 UAS will only be operated below 400 feet AGL, and within 25 feet from the structures being inspected, risks to manned aircraft is minimized. While a UAS is always required to yield to manned aircraft, conversely manned aircraft are advised to avoid the facilities to be inspected by the UAS under contract. Specifically, the FAA strongly advises that - *"in the interest of national security and to the extent practicable, pilots are strongly advised to avoid the airspace above, or in proximity to, such sites as power plants (nuclear, hydro-electric, or coal), dams, refineries, industrial complexes, military facilities and other similar facilities."*

DRONESTHATWORK, LLC's lead pilot, being a retired Electric Utility Manager, is intimately knowledgeable of NERC best practices and clearly understands how to operate the LB700 UAS in a manner that will not unduly risk the reliable operation of any bulk electric generating facility.

It must be emphasized that large industrial complexes, and in particular, large bulk electric generating stations are inherently secure environments due to NERC requirements regarding national security. Considering this, the ability to control a secure flight operations perimeter is greatly enhanced when compared to any other public environment.

8. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.121(a) entitled Altimeter Settings:

Relief is requested because the LB700 UAS is not equipped with a barometric altimeter than can be corrected to the elevation of the departure airport or barometric pressure. Rather, the LB700 UAS will utilize either the GPS altitude indicator and/or the physical height of the structure being inspected as a reference not-to-exceed elevation.

Equivalent Level of Safety

An equivalent level of safety will be assured by following the process detailed in the petitioner's FOMM for altitude monitoring. The most accurate and reliable method is to verify the as-built elevation of the structure from final, approved construction drawings. Upon reaching the vertical limit of the structure of known height, the camera operator will alert the PIC to stop climbing and descend upon obtaining visual confirmation from the live video downlink that the top of the structure has been reached.

9. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.151(a) entitled Fuel Requirements for Flight in VFR Conditions:

Relief is requested because the LB700 UAS is battery powered with a flight duration of approximately 10 minutes and, as such, requires an exemption to the 30 minute reserve fuel requirement.

Equivalent Level of Safety

An equivalent level of safety will be assured by limiting all flights to 10 minutes or 25% remaining battery capacity, whichever occurs first. In addition, the petitioner's FOMM sets forth procedures to secure the area of flight operations such that no nonessential personnel may enter the exclusion zone while flights are being conducted.

10. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.203(a) and (b) entitled Civil Aircraft:

Relief is requested because the LB700 UAS is unmanned and, as such, has no cabin, cockpit, pilot station, or entrances thereto. Therefore, the flight crew member is located at the ground control station and no passengers are carried at any time. The petitioner has previously requested relief from the requirements of 14 C.F.R. § 91.7(a): Civil Aircraft Airworthiness in this submittal.

Equivalent Level of Safety

An equivalent level of safety will be assured by locating the required documentation at the ground control station, where it is immediately available to the flight crew member PIC of the LB700 UAS any time the unmanned aircraft is operating.

The documents specified must be made available within 7 days to any FAA, U.S. Department of Defense, Department of Homeland Security, or law enforcement official upon request.

11. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.405(a) entitled Maintenance, Preventive Maintenance, Alterations.

Relief is requested because the LB700 UAS will not be issued an FAA airworthiness type certificate.

Equivalent Level of Safety

An equivalent level of safety will be assured by performing inspections and maintenance in accordance with the procedures detailed in the petitioner's FOMM. The DRONESTHATWORK, LLC

lead pilot has 35 years of experience building and maintaining fundamentally similar unmanned aircraft as well as 4 years of maintenance records specifically for the LB700 UAS.

12. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91.407(a)(1) entitled Operation after Maintenance, preventive maintenance, rebuilding, or alteration.

Relief is requested because the LB700 UAS will not be issued an FAA airworthiness type certificate.

Equivalent Level of Safety

An equivalent level of safety will be assured by performing inspections and maintenance in accordance with the procedures detailed in the petitioner's FOMM. The DRONESTHATWORK, LLC lead pilot has 35 years of experience building and maintaining fundamentally similar unmanned aircraft as well as 4 years of maintenance records specifically for the LB700 UAS.

13. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91. 409(a)(2) entitled Inspections.

Relief is requested because the LB700 UAS will not be issued an FAA airworthiness type certificate.

Equivalent Level of Safety

An equivalent level of safety will be assured by performing inspections and maintenance in accordance with the procedures detailed in the petitioner's FOMM. The DRONESTHATWORK, LLC lead pilot has 35 years of experience building and maintaining fundamentally similar unmanned aircraft as well as 4 years of maintenance records specifically for the LB700 UAS.

14. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From Section § 91. 417(a) and (b) entitled Maintenance Records.

Relief is requested because the LB700 UAS will not be issued an FAA airworthiness type certificate.

Equivalent Level of Safety

An equivalent level of safety will be assured by performing inspections and maintenance in accordance with the procedures detailed in the petitioner's FOMM. The DRONESTHATWORK, LLC lead pilot has 35 years of experience building and maintaining fundamentally similar unmanned aircraft as well as 4 years of maintenance records specifically for the LB700 UAS.

15. Extent Of Relief DRONESTHATWORK, LLC Seeks And The Reason DRONESTHATWORK, LLC Seeks Relief From 14 C.F.R. § 21.185.

Relief is requested from the airworthiness certificate requirements of the Federal Aviation Regulations. The petitioner proposes to commercially operate the LB700 UAS without an airworthiness certificate, for the special purpose of conducting inspections of elevated structures for the electric utility industry (or similar clients and uses). Flight operations will

only be conducted on clients private property with approval, pursuant to specific operating limitations and a Flight Operations & Maintenance Manual ("FOMM"). DRONESTHATWORK, LLC seeks relief from the airworthiness certificate requirements of 14 C.F.R. § 21.185 to the extent that the LB700 UAS, which has not been type certificated by the FAA, may be operated as if it were a restricted category aircraft for a single, defined, special purpose operation, specifically, (aerial inspection of elevated structures).

Equivalent Level of Safety

An equivalent level of safety will be assured because operation of the LB700 UAS will not create a hazard to users of the NAS, or the public, or otherwise pose a threat to national security. Further, Section 333 provided the authority for such UAS to operate without airworthiness certification. Specifically, Section 333 states the following, in part:

> (b) Assessment of Unmanned Aircraft Systems.--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; and
>
> (2)whether a certificate of waiver, certificate of authorization, or airworthiness certification under section 44704, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).

The proven safe operational history of DRONESTHATWORK, LLC's. Lead Pilot over the past 35 years flying fundamentally similar unmanned rotorcraft, as well as the specific parameters of the DRONESTHATWORK, LLC's intended operation pursuant to this exemption, demonstrate that the LB700 UAS can be operated in the NAS without creating a hazard to other aircraft or persons or property on the ground. All operations shall be performed in strict adherence to the provisions set forth in the DRONESTHATWORK, LLC's. Flight Operations & Maintenance Manual ("FOMM"). Accordingly, the FAA may approve the LB700 UAS , without an airworthiness certificate, by setting forth specific operating limitations to ensure a level of safety equivalent to what would be provided otherwise by airworthiness certification.

D. The Reasons Why Granting DRONESTHATWORK, LLC's Request Would Be In The Public Interest:

Granting the present Petition for Exemption will further the public interest by providing a much more thorough and comprehensive conditional assessment of aging electric utility infrastructure (or similar clients/uses). Utilities and other similar industries rely on accurate inspection data in order to make intelligent and timely run/repair/retire decisions of critical structures. The U.S. still relies heavily on fossil fuel powered electric generation to supply the country's energy needs. These plants were designed for a useful service life of 25 years on average. The vast majority have now significantly exceeded this milepost through the use of life extension programs and EPA mandated environmental upgrades.

It is important that the large critical structures these plants rely on receive regular condition assessments in order to prevent catastrophic failures and potential lost generation. This is vital in order for utilities to continue to safely provide reliable energy to the nation's power grid and, consequently, enhance national security. Additionally, use of the LB700 UAS replaces the need to put the lives of ironworkers at high risk using rope access to provide an inspection that is far less thorough, yet more costly and hazardous to human life to perform. The LB700 can typically inspect 100% of the exterior of a large structure in one fourth the time required for a human to physically inspect 10% of the same area.

E. PRIVACY

Flight operations will only be performed on private property with written consent of the owner or governing body. Since the sole purpose of each flight is to inspect a structure - gathering images of any other object, for any other purpose, is both unwarranted and unwanted.

F. SUMMARY THAT CAN BE PUBLISHED IN THE FEDERAL REGISTER

DRONESTHATWORK, LLC seeks exemption from the requirements of part 21, subpart H: part 27 and Sections 45.23(b), 61.113(a) and (B), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of 14 C.F.R.. This exemption would permit DRONESTHATWORK, LLC to operate the LB700 Unmanned Aircraft System ("UAS") for the special purpose of performing aerial inspections of elevated structures for the electric utility industry (or similar clients/uses) while always operating under the core premise that ALL aviation related accidents are preventable.

Utilities and other similar industries rely on accurate conditional assessments in order to make intelligent and timely run-repair-retire decisions of critical structures. This is vital and critical in order for utilities to continue to safely provide reliable energy to the nation's power grid and, consequently, enhance national security. Use of the LB700 UAS replaces the need to put the lives of ironworkers at risk by using rope access to provide an inspection that is far less thorough, yet more costly and hazardous to human life to perform. The LB700 can typically inspect 100% of the exterior of a large structure in one fourth the time required for a human to physically inspect 10% of the same area. Additionally, the close proximity inspections proposed in this request cannot be safely performed using full size aircraft.

DRONESTHATWORK, LLC is uniquely qualified to perform this work as its lead pilot has 35 years experience as a professional in both designing, building, maintaining and piloting unmanned aircraft, combined with 35 years experience inspecting and/or managing large-scale critical infrastructure inspections for one of the world's largest global electric utilities.

G. ADDITIONAL INFORMATION, VIEWS, OR ARGUMENTS AVAILABLE TO SUPPORT DRONESTHATWORK, LLC'S REQUEST.

1. DRONESTHATWORK, LLC's Lead Pilot Has Been Safely Operating UAS's for 35 Years.

The skills required to become an FAI World Championship caliber unmanned aircraft pilot are considerable. They include spending thousands of hours designing, building, maintaining and remotely piloting aircraft at the highest possible level over many years. All of these skills are identical to those required to safely operate a UAS in an industrial environment. The LB700 UAS is fundamentally similar in design and performance to the remotely piloted aircraft flown by DRONESTHATWORK, LLC's Lead Pilot in aeromodeling competition for 22 years between 1980 to 2002.

2. The Specifications Of The LB700 UAS Demonstrate Its Safe Characteristics.

The LB700 UAS does not create a hazard to users of the NAS or the public considering its size, weight, speed, and intended operation. Further, these same operational characteristics assures that its operation poses no threat to national security. The specifications of the LB700 are detailed within the FOMM submitted as part of this petition.

Petitioner submits the FOMM manual as a confidential document under 14 C.F.R. 11.35(b) as the entire manual contains proprietary information that the petitioner has not and will not share with others. The manual contains non-public information and is protected from release under the Freedom of Information Act 5 USA 552 et.seq.

3. The secure and sterile flight operations zone maintained clear of all non-essential personnel.

Electric Generating Stations, for example, are typically very space-limited. Establishing large 500 foot exclusion zones is not always practicable as it would shut down critical plant operations. A 200 foot exclusion zone exceeds that used by 250 foot tall construction cranes making OSHA defined "critical lifts" of hundreds of tons. This distance is more than double the minimum distance spectators must be spaced away from an aerobatic flightline at an RC aerobatic event as sanctioned by the Academy of Model Aeronautics. This distance has been used for decades at thousands of AMA sanctioned events and has been proven reasonable for remotely piloted aircraft of larger size performing aerobatic maneuvers. The petitioner's FOMM details administrative procedures for assuring the safety of persons and property on the ground while employing a continuously monitored 200 foot exclusion zone for nonessential personnel.

CONCLUSION

DRONESTHATWORK, LLC lead pilot has literally accumulated a lifetime of practical experience in all aspects of small unmanned aerial vehicles. While procedures and processes are critical components to safely operating a UAS in an industrial environment, experience and good judgment play equally important roles. In a rapidly growing industry, where the trends all point towards reliance upon "plug and play" technology, rather than demonstrated piloting skills and technical experience, DRONESTHATWORK, LLC believes that the airman's knowledge it has accumulated could prove beneficial to the FAA's efforts going forward.

DRONESTHATWORK, LLC has applied the principles of Stop Work Authority, Management of Change, Continuous Improvement and Near-Miss Tracking to great advantage with tangible results on safe UAS operations. DRONESTHATWORK, LLC would welcome the opportunity to share these processes, procedures, operating data, or any other information, that is non-proprietary in nature, in an effort to advance the goal of safe integration of small commercial unmanned aerial systems into the NAS.