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

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

May 15, 2015

Exemption No. 11604
Regulatory Docket No. FAA–2015–0514

Mr. Richard F. Soto
Sky Guardian LLC
P.O. Box 1074
Bisbee, AZ 85603

Dear Mr. Soto:

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

By letter dated February 25, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Sky Guardian LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial acquisitions and research over certain populated and rural areas of the United States.

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

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom 2 Vision+.

In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited

operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Sky Guardian 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, Sky Guardian 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 DJI Phantom 2 Vision+ 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: 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 May 31, 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: SKY GUARDIAN LLC FOR AN EXEMPTION SEEKING RELIEF FROM THE REQUIREMENTS OF TITLE 14 OF THE CODE OF FEDERAL REGULATIONS SECTIONS 61.113(a) & (b), 91.7(a), 91.121, 91.151(a) &(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), AND 91.417(a) & (b) CONCERNING COMMERCIAL OPERATION OF THE PHANTOM 2 UASUNMANNED AIRCRAFT SYSTEM PURSUANT TO SECTION 333 OF THE FAA MODERNIZATION AND REFORM ACT OF 2012 (PUBLIC LAW 112-95)

Submitted on February 25, 2015

RICHARD F. SOTO
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GLOSSARY OF ABBREVIATIONS

AGL Above Ground Level
AOI Area of Interest
ATC Air Traffic Control
ATO Air Traffic Organization AV Aerial Vehicle
C.F.R. Code of Federal Regulations
COA Certificate of Authorization FAA Federal Aviation Administration FAR Federal Aviation Regulation
GCS Ground Control Station
GPS Global Positioning System
LOL Loss of Link
NAS National Airspace System
NOTAM Notice to Airman
PIC Pilot In Command
Section 333 FAA Modernization and Reform Act of 2012 (FMRA) Section 333
SOP Standard Operating Procedures
UA Unmanned Aircraft UAS Unmanned Aircraft System
VFR Visual Flight Rules
VLOS Visual Line of Site
VMC Visual Meteorological Conditions
VO Visual Observer
VTOL Vertical Takeoff and Landing

SUMMARY

Sky Guardian seeks exemption from the requirements of Part 21; and 14 C.F.R §§ 45.23(b); §§ 61.113(a) & (b), 91.7(a), 91.9(b)2; 91.103(b); 91.109; 91.119, 91.121, 91.151(a) and (b), 91.203(a) & (b), 91.405(a), 91.407(a)(1), 91.409 (a)(1) & (a) (2), and 91.417(a) & (b), to operate an Unmanned Aircraft System pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). This exemption will permit Sky Guardian LLC to operate an Unmanned Aircraft System (UAS) for the commercial purpose of conducting aerial acquisitions and research over certain populated and rural areas of the United States.

INTRODUCTION AND INTERESTS OF THE PETITIONER

Sky Guardian LLC is an unmanned aircraft solutions provider that integrates UAS services that enable the UAS technology for federal, state, local, and commercial clients. Sky Guardian LLC is focused on providing solutions for utilizing unmanned aircraft to safely and efficiently collect data that is precise, accurate, and timely.

Sky Guardian LLC' s mission is to use unmanned aircraft to simplify and increase the effectiveness of data collection in: Natural Resources and Conservation, Construction and Infrastructure, Precision Agriculture, Mining Industry, Inspection, Monitoring and to provide the Film and Real Estate industries with augmented Video and Film Services.

As set forth in this Petition, Sky Guardian LLC seeks to commercially operate its Phantom 2 UAS over certain populated and rural areas of the United States for the purpose of conducting aerial acquisitions and research.

BACKGROUND

Unmanned Aircraft System: DLSR Pros Phantom 2

Sky Guardian LLC seeks an exemption to operate the Sky Guardian Phantom 2 UAS for compensation or hire within the National Airspace System (“ NAS”). The Phantom 2 is the DJI Phantom 2 Vision +. The inherent safety features, sophistication, programmability, GPS navigation, return home capability, airport vicinity no-fly feature and restricted altitude feature, as well as differentiating radio frequency (rf) for aircraft controller/receiver and for the camera make this a much safer UAV for the purposes of this petition. This is a hobby grade radio controlled UAV that has the capacity for software upgrades. It is light, less than 3 pounds including battery and camera. Incorporated into the programming of the Phantom is an automatic return home feature that automatically directs the craft back to point of takeoff should communication with the transmitter be lost. The Phantom has a cruising speed of 15 knots, with a maximum speed of 29 knots. Maximum flight time is 25 minutes. Gross weight is approximately 3 pounds. The Phantom has an additional communication link between the camera and craft on a different rf for a smart phone connection. Allowing the operator or Pilot In Command (PIC) to monitor battery level, altitude (AGL), distance from PIC, camera imagery, and control camera angle.

The software for the Phantom allows the operator or PIC to set maximum altitude AGL for each flight, allowing customization of flights to no higher than 100 feet, 150 feet, or 250 feet AGL as examples. The 400 foot maximum AGL can be programmed into the UAV's software pre-flight to insure compliance with FAA standards. Adding to the safety capabilities of this UAV. This UAV is programmed to remain in position when controls are released. Maintaining altitude and GPS location.

The Phantom has an altitude and radar monitoring function that allows the operator more precise determination of height, direction of flight and distance from the operator PIC. The operator or PIC can monitor GPS lock status while UAV is in flight, with the ability to anticipate loss of GPS locking so the operator or PIC can land the UAV as a precaution. Best explanation of the Phantom's sophistication and capabilities can be observed through a video explanation of an earlier model that was predecessor to the Phantom 2 Vision + through link http://youtu.be/3mqj-WBRKmE. The Phantom 2 Vision + maintains all capabilities defined in the video.

The DJI Phantom 2 Vision +'s 2.4 ghz transmitter/controller/receiver rf for managing flight with a 5.8 ghz rf transmitter/receiver for video/photography functions eliminates the rf conflict experienced with the Blade 350 QX, and is by far the safer of the two when considering public and NAS safety. Considering the programmability and safety features of this UAV (Phantom 2 Vision +), it serves as the best option to protect the Public and NAS for the purposes of this petition.

Similarities, Distinctions and Differences Though the petition of Astraeus Aerial (FAA-2014-0352), referred hereafter as the Astraeus Petition and or Petitioner Astraeus, has numerous similarities to that of Sky Guardian LLC, referred hereafter as the Sky Guardian LLC, there are some distinct and substantial differences. Like the Astraeus Petition, the Sky Guardian LLC is for UAV operation without pilot, passengers nor property on board. Considering that the Phantom UAV is a sophisticated hobby grade quad-copter with gross weight less than 3 pounds

Aerial video/photography operations for private property owner's aide with an enhanced perspective for characteristics, amenities, and benefits a private property that cannot be displayed through ground level video/photography.

Sky Guardian LLC is using a UAV that has the capability for taking off and landing at a single point, identical to a helicopter. There are no runways, aided take off apparatuses, nor routes that need to be flown to areas being aerial video recorded or photographed, allowing a reduced and more confined area of flight.

The Astraeus Petition is for movie sets involving a significant number of people, non-aerial equipment, moving or action sequences, and a potentially broad geographical area where individuals and equipment may be in motion. Requiring extensive observation, awareness, coordination, and safety precautions. The Sky Guardian LLC request for populated areas is for video/photography of stationary objects requiring briefer periods for recording in a tightly confined area. The stationary setting of objects poses significantly lower risks for safety, allowing the operator or Pilot In Command (PIC) to focus primarily on stationary objects for shorter periods of time. With the movie action scenes, numerous takes may require repeated flights, whereas a stationary object would in most cases require a single flight.

Homeowner written consent for aerial video/photography shall be obtained prior to flight. Signs will be posted cautioning anyone within the vicinity to remain back a minimum of 200 feet. Observer(s) to assist and warn/advise the PIC will be utilized in situations where spectators may be within 500 feet of the flight area. The UAVs utilized in this petition are hobby grade quad-copters that do not require an airman certificate for non-commercial flight involving less restrictive less regulated flight.

The motors, rotors, propellers, body/frame, landing pads, etc. for the UAV's utilized in this petition are not complicated. Engineering and design allows layman maintenance. Recording part replacement for this UAV may prove redundant due to the simplicity of the craft.

Sky Guardian LLC requests modification, waiver or exemption and clarification (within reason) concerning section 91.119 prohibition of flight in congested areas. Such restriction puts homeowners in subdivisions at a disadvantage by limiting enhanced marketing of their homes; thereby discriminating against them. Vertical takeoff and landing while video recording or photographing a home can allow an enhanced perspective for view or proximity of mountains, golf course, manmade lake or other attractions not possible through ground level video recording or photography. Sky Guardian LLC requests waiver for this condition to allow reasonable and responsible aerial video/photography in congested areas of subdivisions and neighborhoods. Sky Guardian LLC requests a maximum height of 300 feet AGL.

In compliance with Section 90.151 (a) & (b) the Phantom is a battery operated UAV/UAS with battery level monitoring capability. Fully charged battery flight time is rated at 25 minutes, with videos/photos taking much less time to record. Operator or PIC is warned when battery level is low.

Sky Guardian LLC requests waiver/exemption from Section 91.203 (a) &(b) since the Phantom is a hobby grade UAV/UAS that should not require an airworthiness certificate or a registration certificate. Posting of special flight authorization would not be possible since the Phantom has no cabin and is not large enough to carry a certificate. However, a special flight authorization can be maintained by the operator to make available upon request.

The Phantom 2 UAV's that will be operated by Sky Guardian LLC will and marked in accordance with 14 C.F.R. Part 45.2 Identification and Registration Marking. The Phantom 2 will be marked in the largest possible lettering by placing the word "Experimental" on its fuselage as required by. § 45.29(f)

BASIS FOR PETITION

Petitioner, Sky Guardian 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 petitions the Administrator to operate the Phantom 2 UAS in the NAS, and for an exemption from the requirements of 14 C.F.R §§ 61.113(a) & (b), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a),& (b) 91.203(a) & (b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), 91.417(a) & (b).

In consideration of the size, weight, speed, and limited operating area associated with the unmanned aircraft and its operation, Sky Guardian LLCs operation of the Phantom 2 UAS meets the conditions of Section 333 and therefore, will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

Accordingly, Sky Guardian LLC requests relief from Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), as these sections set forth requirements for maintenance that only apply to aircraft with an airworthiness certificate.

Sky Guardian LLC submits that the requested relief is proper since an equivalent level of safety will be ensured. Sky Guardian LLC, will use their Operators to perform maintenance, alterations, or preventive maintenance on the UAS using the methods, techniques, and practices prescribed in the manufacturer' s maintenance manual, Owners Operations Manual, Sky Guardian LLC Risk Management forms. Furthermore, Sky Guardian LLC will document and maintain all maintenance records for the Phantom 2 UAS.

Relief from certain requirements of Section 61.113(a) and (b), entitled Private pilot privileges and limitations: Pilot in command, is requested by Sky Guardian LLC to the extent necessary to allow a Pilot in Command (PIC) that has completed a certified ground school and has up to 8 hours of dual flight time with a Certified Flight Instructor or holds a Basic Ground or Advanced Ground Instructors certification, or holds a private pilot certificate and a third-class airman medical certificate or above, and who has completed the Phantom 2 UAS training, provided by Sky Guardian LLC and currency requirements which will consist of 3 three (20 minutes) missions every 6 months in a training environment, to conduct the proposed UAS operations. Sky Guardian LLC submits that the conditions and limitations set forth herein will ensure the safety of the NAS, as well as the safety of persons or property on the ground.

It is noted that there are many groups and agencies that are requiring the operators to hold a pilot certificate and medical certificate. We submit that since the 1970s the FAA has not required anyone to maintain a Pilot License to operate an ultralight 1 place aircraft.

Under section 103 Certification and registration

(a) Notwithstanding any other section pertaining to certification of aircraft or their parts or equipment, ultralight vehicles and their component parts and equipment are not required to meet the airworthiness certification standards specified for aircraft or to have certificates of airworthiness.

(b) Notwithstanding any other section pertaining to airman certification, operators of ultralight vehicles are not required to meet any aeronautical knowledge, age or experience requirements to operate those vehicles or to have airman or medical certificates.

(C) Notwithstanding any other section pertaining to registration and marking of aircraft, ultralight vehicles are not required to be registered or to bear markings of any type. Under section 107.7 Certification and Registration

(a) In addition for many years the FAA has not required operators who fly RC controlled airplanes and helicopters to have any certifications. Many of these operators have not received any Airman Knowledge training. Sky Guardian LLC operators will have attended a certified ground school giving them the basic Airman knowledge required to conduct flight operations

Sky Guardian LLC seeks relief from Section 91.7(a), entitled civil aircraft airworthiness, because the Phantom 2 UAS does not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. As such, Sky Guardian LLC submits that it will ensure that the Phantom 2 UAS is in an airworthy condition, prior to every flight, by determining that the UAS is in compliance with the Phantom 2 UAS Operator Manual, and the Phantom 2 UAS Maintenance Manual, and that the UA is in condition for safe flight.

Sky Guardian LLC also seeks an exemption from the requirements of Section 91.121, entitled Altimeter Settings, as the Phantom 2 UAS is equipped with Global Positioning Systems (GPS) equipment, which ensures that a ground level pressure setting will be established prior to each flight. The Phantom 2 UAS GPS equipment ensure safety by providing the PIC with adequate information concerning altitude of the UA, above ground level (AGL), as shown on the heads-up display of the GCS.

Additionally, Sky Guardian LLC seeks an exemption from the requirements of Section 91.151 (a) and (b), Fuel requirements for flight in VFR conditions. Sky Guardian LLC submits that safety will not be affected by terminating flights of the battery powered Phantom 2 UAS after 20 minutes of continuous flight, which would allow for five minutes (i.e., 20 percent) of battery power remaining. Flights over populated areas would last from anywhere between 10 and 20 minutes.

In accordance with 14 C.F.R. § 11.81, Sky Guardian 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:

Sky Guardian LLC
P.O. Box 1074 Bisbee, Arizona 85603

The point of contact for this Petition and specific contact information is as follows:

Richard F. Soto
Sky Guardian LLC
P.O. Box 1074
Bisbee, Arizona 85603 Tel: (520) 236-6312
Email: rsoto@Airspaceguardian.com

B. The Specific Sections of 14 C.F.R. From Which Sky Guardian LLC Seeks Exemption.

1. Sky Guardian LLC Seeks Exemption From The Requirements Of Section 61.113(a) and (b).

Section 61.113, entitled Private pilot privileges and limitations: Pilot in command, subsections (a) and (b) prescribe the following, in part:
(a) No person who holds a private pilot certificate may act as a pilot in command (PIC) of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as PIC of an aircraft.

(b) A private pilot may, for compensation or hire, act as PIC 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.

2. Sky Guardian LLC Seeks Exemption From The Requirements of Section 91.7(a).

Section 91.7, entitled Civil aircraft airworthiness, subsection (a), states the following:
(a) No person may operate a civil aircraft unless it is in an airworthy condition.
(b) Prescribes that the pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight and that the PIC shall discontinue the flight when un-airworthy mechanical, electrical, or structural conditions occur.

3. Sky Guardian LLC Seeks Exemption From The Requirements Of Section 91.121.

Section 91.121, entitled Altimeter settings, subsection (a), states the following, in relevant part:
(a) 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--

(1) Below 18,000 feet MSL, to--

(i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;

(ii) If there is no station within the area prescribed in paragraph (a)(1)(i) of this section, the current reported altimeter setting of an appropriate available station; or

(iii) In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure;

4. Sky Guardian LLC Seeks Exemption From The Requirements Of Section 91.151(b).

Section 91.151, entitled Fuel requirements for flight in VFR conditions, subsection (a) & (b), states the following:
(b) No person may begin a flight in a rotorcraft under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 20 minutes.

5. Sky Guardian LLC Seeks Exemption From The Requirement Of Section 91.405(a).

Section 91.405, entitled Maintenance required, subsection (a), states the following: Each owner or operator of an aircraft—

(a) Shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter.

6. Sky Guardian LLC Seeks Exemption From The Requirements Of Section 91.407(a)(1).

Section 91.407, entitled Operation after maintenance, preventive maintenance, rebuilding, or alteration, subsection (a) (1), states the following:

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

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

7. Sky Guardian LLC Seeks Exemption From The Requirements Of Sections 91.409(a)(1) And 91.409(a)(2).

Section 91.409, entitled Inspections, subsection (a), states the following:

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

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

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

8. Sky Guardian LLC Seeks Exemption From The Requirements Of Sections 91.417(a) & 91.417(b).

Section 91.417, entitled Maintenance records, subsections (a) and (b), state the following:

(a) Except for work performed in accordance with §§ 91.411 and 91.413, 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 to 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 revision 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 this 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.

C. The Extent Of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks The Relief.

1. Extent of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks Relief From Section 61.113(a) And (b).

Relief from Section 61.113(a) and (b), entitled Private pilot privileges and limitations: Pilot in command, is requested to the extent necessary to allow a PIC who has completed an approved ground school with a passing grade and has completed no less than eight hours of dual flight hours or has a current BGI or AGI certification or who is holding a private pilot certificate and a third-class airman medical certificate, and who has completed the Phantom 2 UAS training and currency requirements, to conduct the proposed UAS flight operations for compensation.

This relief is requested since the limitations set forth in Section 61.113(a) and (b) state that a private pilot may, for compensation or hire, act as PIC 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.

As set forth more fully below, Sky Guardian LLC submits that an equivalent level of safety will be maintained because no PIC will be allowed to operate the Phantom 2 UAS unless that PIC has demonstrated, Airman' s Knowledge through attendance of a certified ground school, and the Phantom 2 UAS training and currency requirements, that the PIC is able to safely operate the Phantom 2 UAS in a manner consistent with the operations specifications as described in this exemption, including evasive and emergency maneuvers, as well as maintaining appropriate distances from people, vessels, vehicles and structures.

2. Extent of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks Relief From Section 91.7(a).

Relief from Section 91.7(a), entitled Civil aircraft airworthiness, is requested to the extent required to allow Sky Guardian LLC to determine that the Phantom 2 UAS is in an airworthy condition prior to every flight by ensuring that the UAS is in compliance with the Phantom 2 UAS Operator Manual, and the Phantom 2 UAS Maintenance Manual, and that the UAS is in condition for safe flight.

Sky Guardian LLC seeks the requested relief because the Phantom 2 UAS does not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H. Therefore, Sky Guardian LLC will ensure that the Phantom 2 UAS is in an airworthy condition based upon its compliance with the operating documents prior to every flight, and as stated in the conditions and limitations below.

3. Extent of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks Relief From Section 91.121.

Relief from Section 91.121, entitled Altimeter settings, may be required to allow flight operations of the Phantom 2 UAS, which utilizes GPS equipment, to ensure that a ground level pressure setting will be established prior to each flight, in order to report altitude to the PIC. Sky Guardian LLC seeks the requested relief because the Phantom 2 UAS does not utilize a typical barometric altimeter onboard that may be set as contemplated by Section

91.121. As more fully set forth below, an equivalent level of safety will be maintained since the Phantom 2 UAS is equipped with GPS equipment, which will ensure that a ground level pressure setting will be established prior to each flight, and provides the PIC with altitude information of the UA, above ground level (AGL), on the heads-up display of the ground control station (GCS).

4. Extent Of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks Relief From Section 91.151(b).

Relief from Section 91.151(b), entitled Fuel Requirements for flight in VFR conditions, is requested to the extent required to allow flights of the battery powered Phantom 2 UAS, during daylight hours in visual meteorological conditions under visual flight rules (VFR), to continue for a total duration of 20 minutes, which will ensure that the UA will land with five minutes (i.e., 20 percent) of battery power remaining. Sky Guardian LLC seeks the requested relief, because without an exemption from Section 91.151(b), the flight time duration of the battery powered Phantom 2 UAS will severely constrain the practicality of any aerial acquisition and research flight operations which Sky Guardian LLC proposes to conduct pursuant to this Petition.

Significantly, as set forth below, the technical specifications of the Phantom 2 UAS, Owners Operations and Maintenance Manual, and Sky Guardian LLC Services' proposed operating limitations, ensure that Sky Guardian LLC will safely operate the battery powered Phantom 2 UAS during daylight hours in VFR conditions for a total flight duration of 20 minutes, landing with five minutes (i.e., 20 percent) of battery power remaining.

5. Extent Of Relief Sky Guardian LLC Seeks And The Reason Sky Guardian LLC Seeks Relief From Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), And 91.417(a) & (b).

Since Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) only apply to aircraft with an airworthiness certificate, Sky Guardian LLC requests relief from these Sections because the Phantom 2 UAS does not require an airworthiness certificate. As set forth more fully below, the Phantom 2 UAS meets the conditions of Section 333 of the FMRA for operation without an airworthiness certificate. Accordingly, Sky Guardian LLC, will use Sky Guardian LLC operators to perform maintenance, alterations, or preventive maintenance on the UAS using the methods, techniques, and practices prescribed in the manufacturer' s maintenance manual. Furthermore, Sky Guardian LLC will document and maintain all maintenance records for the Phantom 2 UAS.

D. The Reasons Why Granting Sky Guardian LLC Services" Request Would Be In The Public Interest; That Is, How It Would Benefit The Public As A Whole.

Granting the present Petition will further the public interest by allowing Sky Guardian LLC to safely, efficiently, and economically perform aerial acquisitions and research over rural and populated areas of the United States, commercially, in support of government entities, agriculture, scientific studies, wildlife monitoring, forestry operations, and the oil, gas, and mining industries. Additionally, use of the Phantom 2 UAS will decrease congestion of the NAS, reduce pollution, and provide significant benefits to the economy. Notably, the benefits of Sky Guardian LLC' s proposed operation of the Phantom 2 UAS will be realized without implicating any privacy issues.

1. The Public Will Benefit From The Aerial Acquisition And Research Performed.

Sky Guardian LLC submits this Petition to commercially operate the Phantom 2 UAS and perform aerial acquisition and research throughout rural and populated areas of the United States, in support of government entities, agriculture, scientific studies, wildlife monitoring, forestry operations, mining, and the oil and gas industries. The Phantom 2 UAS will provide safe, efficient, and economical aerial acquisition and research operations to further each of these fields, all of which are critical to the well-being of the general public.

The specific operations that Sky Guardian LLC will perform with the Phantom 2 UAS demonstrate how the requested exemption will directly benefit the above-referenced industries and the public. In agriculture, the aerial acquisition performed by the Phantom 2 UAS will be used to predict and increase crop yields, as well as research for the prevention of crop disease. In the oil, gas and mining industry, the Phantom 2 UAS will be used to aid in facility inspections, survey and plan new worksites, conduct volumetric analysis, and perform right of way analysis. The Phantom 2 UAS will also further environmental management by researching invasive species, mapping deforestation, and surveying point source pollution.

2. The Public Will Benefit From Decreased Congestion Of The NAS.

The Phantom 2 UAS is battery powered and serves as a safe, efficient, and economical alternative to the manned aircraft traditionally utilized to obtain aerial imagery. By reducing the amount of manned aircraft needed to perform aerial acquisitions, an exemption allowing the use of a Phantom 2 UAS would reduce the amount of manned aircraft in the NAS, reduce noise and air pollution, as well as increase the safety of life and property in the air and on the ground.

Furthermore, by reducing the number of manned aircraft operating in the NAS, congestion around airports caused by arriving and departing aircraft will be reduced. The Phantom 2 UAS does not require an airport to takeoff or land. Likewise, a reduction of manned aircraft conducting aerial survey missions would result in fewer aircraft that must be handled by air traffic control during the ground, takeoff, departure, arrival, and landing phases of flight operations.

3. The Public Will Benefit From The Safety And Efficiency Of The Phantom 2 UAS.

Conducting aerial acquisitions with the Phantom 2 UAS, instead of manned aircraft, will greatly benefit the public by drastically reducing the levels of air and noise pollution generated during traditional aerial survey flight operations. By using battery power and electric motors, the Phantom 2 UAS produces no air pollution, and is the most viable environmentally conscious alternative to the cabin class, six cylinder internal combustion twin engine aircraft that are typically utilized for aerial acquisitions, while burning approximately 20-30 gallons per hour of leaded aviation fuel. The Phantom 2 UAS, while reducing the carbon footprint of aerial acquisitions, also reduces noise pollution, as the UA is propelled by battery powered electric motors, rather than an internal combustion engine.

By using the Phantom 2 UAS to perform aerial acquisitions, the substantial risk to life and property in the air and on the ground, which is usually associated with traditional manned aircraft flight operations, will be substantially reduced or completely eliminated. Aside from the lack of flight crew members located onboard the aircraft, the Phantom 2 UAS (weighing approximately 3 pounds at its maximum gross weight, and with no fuel on board), has less physical potential for collateral damage to life and property on the ground, and in the air, compared to the manned aircraft that typically conduct aerial acquisitions (weighing approximately 6,500 pounds with a wingspan of approximately 40 feet, a length of 34 feet, and a fuel capacity of 180 gallons).

4. Performing Aerial Acquisition Operations With The Phantom 2 UAS Will Benefit The Economy.

In addition to being safe and efficient, the Phantom 2 UAS is also an economical alternative to using manned aircraft to conduct aerial acquisitions. As such, operation of the Phantom 2 UAS will allow United States based companies, like Sky Guardian LLC, to remain competitive and contribute to growth of the U.S. economy. Specifically, with the rising cost of aviation fuel and the Environmental Protection Agency (“ EPA”) regulatory actions phasing out leaded aviation fuels, U.S. owned and operated companies must adopt new and alternative technology in order to remain competitive. Operating the battery powered Phantom 2 UAS is one such technology that not only allows companies greater operational flexibility compared to manned aircraft, but provides such flexibility without the high operational cost of a traditional manned aircraft. By operating the Phantom 2 UAS, companies such as Sky Guardian LLC can remain competitive and profitable, and therefore, provide greater job stability to employees and contractors, which will ultimately contribute to growth of the U.S. economy. Improved financial performance of U.S. companies, through commercial use of the Phantom 2 UAS, provides a stable workforce that increases consumer spending; improves local, state, and federal tax revenues; and allows companies to invest in research and development in order to remain competitive both in the United States and abroad.

5. There Are No Privacy Issues.

Similar to the manned aerial acquisition flight operations that have been conducted for decades, Sky Guardian LLC' s proposed operation of the Phantom 2 UAS will not implicate any privacy issues. Specifically, the Phantom 2 UAS will be operated only in rural areas, and in accordance with all Federal Aviation Regulations, including the minimum altitude requirements of 14 C.F.R. § 91.119. Most significantly, the Phantom 2 UAS will not be operated closer than 500 feet to any person, vessel, vehicle, or structure, which is not directly involved in the operation.

E. The Reasons Why Granting The Exemption Would Not Adversely Affect Safety, Or How The Exemption Would Provide A Level Of Safety At Least Equal To That Provided By The Rule From Which Sky Guardian LLC Seeks Exemption.

1. Reasons Why The Phantom 2 UAS Meets The Conditions Of The FAA Modernization and Reform Act of 2012 (FMRA) Section 333.

In consideration of the size, weight, speed, and limited operating area associated with the unmanned aircraft and its operation, Sky Guardian LLC' s operation of the Phantom 2 UAS meets the conditions of FMRA Section 333, and will not require an airworthiness certificate in accordance with 14 C.F.R. Part 21, Subpart H.

Section 333 provides authority for a UAS to operate without airworthiness certification and sets forth requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security. Specifically, FMRA Section 333 states the following, in part:

(a) In General.--Notwithstanding any other requirement of this subtitle, and not later than 180 days after the date of enactment of this Act, the Secretary of Transportation shall determine if certain unmanned aircraft systems may operate safely in the national airspace system before completion of the plan and rulemaking required by section 332 of this Act or the guidance required by section 334 of this Act.

(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 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).

(c) Requirements for Safe Operation.--If the Secretary determines under this section that certain unmanned aircraft systems may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft systems in the national airspace system.

In seeking this exemption, Sky Guardian LLC submits that the Phantom 2 UAS can operate safely in the NAS pursuant to FMRA Section 333, as demonstrated by: (a) the characteristics of the Phantom 2 UAS; (b) the pilot training requirement; and (c) the specific operating limitations.

a. The Specifications Of The Phantom 2 UAS Demonstrate Its Safe Characteristics.

The Phantom 2 UAS does not create a hazard to users of the NAS or the public, or otherwise pose a threat to national security considering its size, weight, speed, and operational capability.

ii. The Phantom 2 UAS Autonomous Flight And Navigation Modes Enable The UAS To Remain Within A Defined Operational Area.

A complete description of the autonomous modes and methods of navigation for the Phantom 2 UAS is provided in the Phantom 2 UAS Operator Manual. A copy of the Phantom 2 UAS Operator manual is contained in this request.

iii. The Phantom 2 UAS Is Designed For Complete Autonomy From Launch To Landing Even In The Unlikely Event Of Loss Of The Control Link Or Navigation.

Although a degradation or loss of the control link, and/or degradation or loss of the source of navigation is unlikely, it is a situation that is well planned for and therefore, is a benign event. The Phantom 2 UAS is designed for complete autonomy from launch to landing with a line of sight operator in the loop monitoring the airframe.

The Phantom 2 UAS uses a two-stage failsafe approach for all avionics failure conditions, including the event of a loss of communications ("Lost Link"). Upon loss of the communication signal, the Phantom 2 UAS will attempt to reacquire the link. If after 10 seconds the link has not been reacquired, the Phantom 2 UAS will continue to attempt to reacquire the link while maintaining the current altitude and navigating to the home waypoint, which is the same as the location of the ground control station. Once at the home waypoint, the Phantom 2 UAS will hover while continuing its attempt to reacquire the link for 30 seconds (to allow for rebooting of the ground control station, if needed). The Phantom 2 UAS will then continue to attempt to re-acquire the link while it navigates through the landing procedure.

The landing procedure for Lost Link is identical to a normal landing procedure. The Phantom 2 UAS will enter into a hover-land procedure; descending while reducing speed until contact with the ground. During this decent and touchdown, the Phantom 2 UAS will remain in controlled flight.

Loss of GPS signal will result in a two-tiered recovery approach. Upon loss of a GPS signal, the Phantom 2 UAS will immediately hover in an attempt to reacquire a signal. If after 15 seconds, a GPS signal is not reacquired, the UA will enter tier-two recovery. At any time during either tier-one or tier-two recovery, the operator can take over with augmented control and utilize its onboard

magnetometer to navigate back to the home waypoint through dead-reckoning. During this failure mode, the observer will call out UA position and movement back to the operator. Once the UA is close enough to resolve orientation, or if operating with a live video payload, the operator can engage manual control and perform a manual landing at the pre-decided landing site.

If a cascade of failures has occurred and Lost-Link has also occurred during tier-two recovery, the Phantom 2 UAS will enter into a hover-land procedure; descending while reducing speed until contacting the ground. Throughout this decent and touchdown, the Phantom 2 UAS will remain in controlled flight.

The Phantom 2 UAS Operator Manual fully describes the features of the Phantom 2 UAS, and sets forth the UA' s operation in the event of a power loss, loss of communications, loss of GPS signal, loss of video link, or software crash. A copy of Phantom 2 UAS Operator Manual is included in this application

iv. The Phantom 2 UAS Ground Control Station And Its Operation.

The Phantom 2 UAS Ground Control Station is identical to the GCS utilized by the Sky Guardian LLC Phantom 2 UAS, which has been granted exemptions to operate commercially in the NAS. See Exemption Nos. 11111 and 11114. A complete description of the operation and specifications of the ground control station (GCS) and flight control software for the Phantom 2 UAS is provided in the Phantom 2 UAS Operator Manual. A complete overview of the features and operation of the GCS software is provided at Chapter 7.

v. Safe Mobile Operation Of The Phantom 2 UAS.

The Phantom 2 UAS may be safely operated by a Pilot-in-Command (PIC) and safety observer co-located with a GCS on a mobile vehicle or watercraft, in order to efficiently perform aerial acquisition operations of large areas. As set forth in the Airspace Operations Manual and Systems Operations Manual, additional limitations and requirements apply to mobile operations of the Phantom 2 UAS, including the following:

The driver/operator of the mobile vehicle must be licensed and fully understand his/her role in the operation.

The mobile vehicle must be organized and clear of any unnecessary debris prior to the operation.

Equipment and personnel positioning within the vehicle must be predetermined and agreed upon by the team. Each team member must use appropriate safety restraint equipment, and such equipment should not interfere with safe flight.

The PIC must have ready communication with the driver/operator of the mobile vehicle, as well as the safety observer.

GCS software must be configured for constant updating of GCS position on the map overlay, and the PIC must be kept aware of mobile vehicle position. The GCS must be mounted or fixed to the mobile vehicle to ensure that no excess movement will shift the GCS during operations.

The route of the mobile vehicle must be determined prior to operation. The PIC must ensure that no part of the route will obscure the safety observer' s view or cause any physical obstacles or obstructions to any member of the flight team.

The Area of Interest (AOI) must be large enough to warrant mobile operations, and the UA cannot be allowed to exit the AOI under any circumstance. The only change to the standard operating procedures (SOP's) with mobile operations must be an update of the LOL (Loss of Link) site. Mobile operations are only permitted if suitable LOL sites are within 500 ft. of the PIC at all times. The entire AOI must also meet the "sterile environment" of a static site as described on page 4-4 of the Operations Manual, otherwise mobile operations are prohibited.

b. Flight Operations of the Phantom 2 UAS Are Limited to the Line Of Sight of a Pilot in Command with a Safety Observer.

Sky Guardian LLC will only utilize pilots who have attended a certified ground school and passed the course and a minimum of 8 flight in a manned aircraft, or hold a BGI, AGI certification or possess a pilot certificate or above and a valid airman medical certificate to act as a pilot in command (PIC) of the Phantom 2 UAS. Additionally, a safety observer will assist all pilots. Both the PIC and safety observer must complete the Sky Guardian LLC Phantom Course and meet the experience requirements as set forth in the Operations Manual.

c. Flights Of The Phantom 2 UAS Will Be Conducted Pursuant To Specific Operating Limitations.

In seeking this exemption, Sky Guardian LLC proposes to commercially operate the Phantom 2 UAS for the special purpose of conducting aerial acquisitions over rural and populated areas of the United States, pursuant to the following specific operating limitations: 1) Operations authorized by the grant of exemption will be limited to the following aircraft described in the operating documents, which is a four-rotor, vertical takeoff and landing, unmanned aircraft weighing less than 3 pounds: Sky Guardian LLC Phantom 2. Proposed operations of any other aircraft will require a new petition or a petition to amend the grant.

2) The Phantom 2 UAS may not be flown at an indicated airspeed exceeding 20 knots.

3) The Phantom 2 UAS must be operated at an altitude of no more than 1,200 feet above ground level (AGL). All altitudes reported to ATC must be in feet.

4) The Phantom 2 UAS must be operated within visual line of sight (VLOS) of the Pilot in Command (PIC) at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses.

5) All operations must utilize a Visual Observer (VO). 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. 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 functions prescribed in the operating documents.

6) The operating documents and the grant of exemption must be maintained and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in the exemption and the procedures outlined in the operating documents, the conditions and limitations in the grant of exemption 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 upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to the grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted the exemption, then the operator must petition for 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.

7) Prior to each flight, the PIC must inspect the Phantom 2 UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the Phantom 2 UAS, the Phantom 2 UAS is prohibited from operating until the necessary maintenance has been performed and the Phantom 2 UAS is found to be in a condition for safe flight. The Phantom 2 UAS Ground Control Station must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records. 8) Any Phantom 2 UAS 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. The PIC who conducts the functional test flight must make an

entry in the Phantom 2 UAS aircraft record of the flight.

9) In addition to the pre-flight inspection section in the operating documents, the preflight inspection must also account for all discrepancies, i.e. inoperable components, items, or equipment, not already covered in the relevant sections of the operating documents.

10) The operator must follow the Phantom 2 UAS manufacturer's UAS aircraft/component, maintenance, overhaul; replacement, inspection, and life limit requirements.

11) The operator must carry out its maintenance, inspections, and record keeping requirements, in accordance with the operating documents. Maintenance, inspection, and alterations must be noted in the aircraft logbook, including total flight hours, description of work accomplished, and the signature of the authorized Phantom 2 UAS maintenance personnel or PIC returning the Phantom 2 UAS to service.

12) The operator's Phantom 2 UAS authorized maintenance personnel or PIC must make a record entry in the UAS logbook or equivalent document of the corrective action taken against discrepancies discovered between inspections.

13) The operator's Phantom 2 UAS authorized maintenance personnel, PIC, and VO must receive and document training referenced in the operating documents.

14) The UAS operated under the exemption must comply with all manufacturer System and Safety Bulletins.

15) The PIC must at least pass an authorized Ground School and have up to 8 hours dual flight time with a CFI or hold a BGI or AGI certification or have a FAA-issued private pilot certificate and a valid FAA-issued airman medical certificate.

16) Prior to operating for hire, the PIC, and VO must have successfully completed Sky Guardian LLC' s training syllabus as outlined in the operating documents. In addition, the PIC and VO must also have successfully completed annual (recurrent) training in accordance with the operating documents. A record of training must be documented and made available upon request by the Administrator. Training, proficiency, and experience-building flights for the purpose of training pilots and VOs to conduct flights authorized by the exemption are permitted under the terms of the exemption.

17) If the Phantom 2 UAS loses communications or loses its GPS signal, it must return to a pre-determined location within the planned operating area and land, or be recovered in accordance with the operating documents.

18) The PIC must abort the flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.

19) The operator must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under the grant of exemption. This COA will also require the operator to request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.

20) The Phantom 2 UAS operated in accordance with the exemption must be identified by serial number, registered in accordance with 14 C.F.R. Part 47, and have identification (N-Number) markings in accordance with 14 C.F.R Part 45, Subpart C. or marked “ EXPERIMENTAL” as large possible.

21) Before conducting flight operations, the radio frequency spectrum used for operation and control of the Phantom 2 UAS must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

22) The documents required under 14 C.F.R §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the Phantom 2 UAS any time the aircraft is operating. These documents must be made available to the Administrator, or any law enforcement official, upon request.

23) The Phantom 2 UAS must remain clear and yield the right of way to all other aircraft operations and activities at all times.

24) If the Phantom 2 UAS is operated from a moving device or vehicle, the operation must be in accordance with the operating documents.

25) Phantom 2 UAS operations may not be conducted during night, as defined in 14 C.F.R. § 1.1. Unless equipped with night vision capabilities and for government support.

26) All operations must be conducted under visual meteorological conditions (VMC). The Phantom 2 UAS 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.

27) During operations in the National Airspace System, the UA may not operate within 5 nautical miles of the geographic center of an airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport’s management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator’ s COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

28) The Phantom 2 UAS may operate over congested or densely populated areas in support of Filming and Real Estate support. These areas include, but are not limited, to the yellow areas depicted on World Aeronautical Charts (WAC), Sectional Aeronautical Charts (Sectionals), or Terminal Area Charts (TAC). However, aeronautical charts may not reflect pertinent local information. Ultimately, it is the PIC's responsibility to maintain the minimum safe altitudes required by 14 C.F.R. § 91.119.

29) Operation of the Phantom 2 UAS must be conducted at least 500 feet from all persons, vessels, vehicles, and structures not directly involved in the operation.

30) Operations of the UA may be conducted at distances less than 500 feet from participating persons, vessels, vehicles or structures that perform an essential function in connection with the special purpose operations. Operations closer than 500 feet from the PIC, VO, operator trainees and essential persons, are permitted when operationally necessary; but never so close as to present an undue hazard, per 14 C.F.R. § 91.119(a).

31) Operations of the UA may be conducted at distances less than 500 feet from unoccupied vessels, vehicles or structures owned by the land owner/controller when the land owner/controller grants such permission and the PIC makes a safety assessment of the risk from operations closer to these objects.

32) All operations shall be conducted with permission from the land owner/controller or authorized representative. Permission from land owner/controller or authorized representative will be obtained for each flight to be conducted.

33) 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 meeting the requirements of 49 C.F.R. Part 830 must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

2. Reasons Why An Exemption From The Requirements Of Section 61.113(a) And (b) Would Not Adversely Affect Safety.

Sky Guardian LLC submits that an equivalent level of safety established by Section 61.113(a) and (b) will be maintained because no PIC will be allowed to operate the Phantom 2 UAS unless that PIC has demonstrated, through the Phantom 2 UAS training and currency requirements, that the PIC is able to safely operate the Phantom 2 UAS in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

Considering Sky Guardian LLC' s proposed area of operations and the operating limitations set forth-above; the parallel nature of private pilot aeronautical knowledge requirements to those of commercial pilot requirements (See Exemption No. 11062); and the airmanship skills necessary to safely operate the Phantom 2 UAS, Sky Guardian LLC submits that the additional manned airmanship experience of a commercially certificated pilot would not correlate to the airmanship skills necessary for Sky Guardian LLC' s specific proposed flight operations.

Additionally, the FAA has previously granted relief from Section 61.113(a) and (b) specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, and 11138).

As in Exemption No. 11109, Sky Guardian LLC will not allow any PIC to operate the Phantom 2 UAS unless that PIC has demonstrated through the Phantom 2 UAS training and currency requirements that the PIC is able to safely operate the Phantom 2 UAS in a manner consistent with this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

3. Reasons Why An Exemption From The Requirements Of Section 91.7(a) Would Not Adversely Affect Safety.

The level of safety established by Section 91.7(a) will be maintained because prior to every flight, Sky Guardian LLC will ensure that the Phantom 2 UAS is in an airworthy condition and safe for flight based upon the Phantom 2 UAS's compliance with its operating documents (i.e. the Phantom 2 UAS Operator Manual, the Sky Guardian LLC Systems Operations Manual, and the Phantom 2 UAS Maintenance Manual) and as stated in the conditions and limitations herein.

Additionally, the FAA has previously granted relief from Section 91.7(a), specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, 11138).

4. Reasons Why An Exemption From The Requirements Of Section 91.121 Would Not Adversely Affect Safety.

The equivalent level of safety established by Section 91.121 will be maintained because the Phantom 2 UAS is equipped with a digitally encoded barometric altimeter and GPS triangulation equipment, with a zero altitude initiation point being established prior to each flight. As such, the PIC on the Phantom 2 UAS is provided the altitude of the UA above ground level (AGL) via a heads-up display of the ground control station (GCS). Specifically, the PIC of the Phantom 2 UAS is provided three different types of altitude information:

(1) Desired Altitude, indicating the commanded altitude, located at the top right corner of HUD as well as above the HUD; (2) Altitude Above Ground Level (AGL), indicating actual altitude relative to height above launch level on the ground, located in the center of the right side of the HUD; and (3) Climb Rate, indicating the current rate of climb, located in the center of the right side of the HUD. Accordingly, the PIC of the Phantom 2 UAS will be provided with all of the necessary altitude information necessary to maintain safe operation of the UA in the NAS. The FAA has previously granted relief from Section 91.121 specific to UAS, in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11112, 11136, 11138).

5. Reasons Why An Exemption From The Requirements Of Section 91.151(b) Would Not Adversely Affect Safety.

A grant of this exemption would ensure the equivalent level of safety established by 14 C.F.R. Section 91.151(b) because the technical specifications of the Phantom 2 UAS, the Phantom 2 Operations Manual, and Sky Guardian LLC proposed operating limitations will ensure that Sky Guardian LLC may safely operate the battery powered Phantom 2 UAS during daylight hours in VFR conditions for a total flight duration of 20 minutes, which will ensure a landing with five minutes (i.e., 20 percent) battery power remaining. Furthermore, previous exemptions granted by the FAA concerning Section 91.151(b) establish that safety is not adversely affected when the technical characteristics and operating limitations of a UAS are considered.

The Phantom 2 UAS is powered by one Lithium Ion 11 Amp hour, 22.2V battery, and is protected by two low battery failsafe's. The ground control station (GCS) provides a battery indicator on the heads-up display, which indicates the Phantom 2 UAS's current remaining battery power measured in volts, and thus provides the PIC with constant awareness of the real-time battery voltage during a flight.

The one low battery failsafe's that protect the Phantom 2 UAS are a "Low AV[2] battery " failsafe and a " Critically low AV battery" failsafe. The " Low AV battery" failsafe flies the UA to the location of the ground control station (GCS), or identified Rally point, when the UA battery reaches a certain threshold of time as configured by the operator, or 22.2V. The "Critically low AV battery" failsafe lands the UA at its current location. This failsafe is triggered if a battery drops below the critical battery voltage as configured by the operator, or 21.2V. [2] The Phantom 2 UAS Operator Manual defines " AV" as " Aerial Vehicle."

Furthermore, an exemption from the requirements of Section 91.151(b) would not adversely affect safety because Sky Guardian LLC will only conduct flights during daylight hours in VMC, with the duration of each flight not to exceed 20 minutes, with five minutes (i.e., 20 percent) battery power remaining.

Likewise, as set forth above, Sky Guardian LLC has proposed specific operating limitations in this Petition that will maintain the equivalent level of safety established by Section 91.151(b), including the following: (1) the Phantom 2 UAS will only be operated during daylight, or night time with night vision equipped cameras in support of government operations, hours (i.e. between the end of morning civil twilight and the beginning of evening civil twilight, as published in the American Air Almanac, converted to local time); (2) Phantom 2 UAS will only be operated pursuant to visual flight rules (VFR) in visual meteorological conditions (VMC); and (3) the duration of each flight shall not exceed 20 minutes.

Significantly, previous exemptions granted by the FAA concerning Section 91.151 establish that safety is not adversely affected when the technical characteristics and operating limitations of the UAS are considered. Relief has been granted for manned aircraft to operate at less than the minimums prescribed in Section 91.151, including Exemption Nos. 2689, 5745, and 10650. Moreover, the FAA has previously granted relief from Section 91.151, specific to UAS in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 8811, 10808, 10673, 11042, 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11136, 11138).

6. Reasons Why An Exemption From The Requirements Of Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), And 91.417(a) & (b) Would Not Adversely Affect Safety.

In seeking this exemption, Sky Guardian LLC submits that an equivalent level of safety with regard to the regulatory maintenance and alteration requirements established by Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b) will be met because Sky Guardian LLC, use its trained operators to perform maintenance, alterations, or preventive maintenance on the unmanned aircraft system using the methods, techniques, and practices prescribed in the manufacturer' s maintenance manual. Furthermore, Sky Guardian LLC will document and maintain all maintenance records for the Phantom 2 UAS.

Since the Phantom 2 UAS will be inspected as prescribed by the manufacturer' s maintenance manual, Sky Guardian LLC will maintain the equivalent level of safety established by Sections 91.405(a), 91.409(a)(1), and 91.409(a)(2). The Phantom 2 UAS Maintenance Manual sets forth Scheduled Maintenance Inspection Procedures for each system and component. Inspection intervals for the Phantom 2 UAS include preflight and post flight inspections, as well as scheduled inspections every 25 hours, 50 hours, 75 hours, and 100 hours of operation.

Likewise, the exemption sought will not adversely affect safety because Sky Guardian LLC will perform maintenance, alterations or preventive maintenance on the UAS using the methods, techniques, and practices prescribed by the manufacturer' s maintenance manual. The Phantom 2 UAS Maintenance Manual details procedures for each component of the UA, including the components of the propulsion system, legs/arms, avionics system, and payload system.

Furthermore, the exemption sought would maintain an equivalent level of safety established by Sections 91.407, 91.417(a) and 91.417(b) because all maintenance of the Phantom 2 UAS will be performed by Sky Guardian LLC trained operators, who will document and maintain maintenance records for the Phantom 2 UAS. Sky Guardian LLC trained technicians are qualified to conduct any and all maintenance to ensure the safe operation of the UAS, conduct all service inspections, and authorize the use of each vehicle UAS based upon completion of appropriate inspections.

Significantly, previous exemptions granted by the FAA concerning Sections 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), 91.417(a) & (b) establish that safety is not adversely affected when the technical characteristics and operating limitations of a UAS are considered. The FAA has previously granted relief specific to UAS in circumstances similar, in all material respects, to those presented herein (e.g. Exemption Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080,

11109, 11110, 11112, 11136, 11138).

7. The FAA May Prescribe Any Other Conditions For Safe Operation.

In accordance with Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) and 14 C.F.R. § 21.16 entitled Special Conditions, Sky Guardian LLC requests that the FAA prescribe special conditions for the intended operation of the Phantom 2 UAS, which contain such safety standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R §§ 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b). Such special conditions will permit safe operation of the UA for the limited purpose of conducting aerial acquisitions over certain rural areas of the United States. FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise pose a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification in accordance with any requirements that must be established for the safe operation of the UAS in the NAS.

Likewise, the Administrator may prescribe special conditions pursuant to 14 C.F.R. § 21.16, for operation of the Phantom 2 UAS, since the airworthiness regulations of 14 C.F.R. Part 21 do not contain adequate or appropriate safety standards, due to the novel or unusual design features of the aircraft. Section 21.16, entitled Special Conditions, states the following:

If the FAA finds that the airworthiness regulations of this subchapter do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature of the aircraft, aircraft engine or propeller, he prescribes special conditions and amendments thereto for the product. The special conditions are issued in accordance with Part 11 of this chapter and contain such safety standards for the aircraft, aircraft engine or propeller as the FAA finds necessary to establish a level of safety equivalent to that established in the regulations. See 14 C.F.R. § 21.16.

Therefore, in accordance with FMRA Section 333 and 14 C.F.R. § 21.16, the FAA may prescribe special conditions for Sky Guardian LLC' s intended operation of the Phantom 2 UAS, which contain such safety standards that the Administrator finds necessary to establish a level of safety equivalent to that established by 14 C.F.R. Part 21, Subpart H, and 14 C.F.R Sections 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).

F. A Summary That Can Be Published In The *Federal Register,* stating:

The Rules From Which Sky Guardian LLC Seeks Exemption:

Sky Guardian LLC seeks exemption from the requirements of 14 C.F.R Sections 61.113(a) & (b), 91.7(a), 91.9 (b)(2), 91.103(b), 91.109 , 91.119, 91.121, 91.151(a) & (b), 91.203(a) & (b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b).

A Brief Description Of The Nature Of The Exemption Sky Guardian LLC Seeks:

This exemption will permit Sky Guardian LLC to commercially operate an Unmanned Aircraft System (UAS) for the purpose of conducting aerial acquisitions and research over certain rural areas of the United States.

G. Any Additional Information, Views, Or Arguments Available To Support Sky Guardian LLC Services" Request.

This Petition is made pursuant to the FAA Modernization and Reform Act of 2012 (FMRA) Section 333, which directs the Secretary of Transportation to determine if certain UAS may operate safely in the NAS. As such, Sky Guardian LLC' s request for exemption may be granted pursuant to the authority of FMRA Section 333 and 14 C.F.R. Part 11, as set forth above.

FMRA Section 333 sets forth the requirements for considering whether a UAS will create a hazard to users of the NAS or the public, or otherwise poses a threat to national security; and further, provides the authority for such UAS to operate without airworthiness certification.

As discussed in detail above, Sky Guardian LLC will operate the Phantom 2 UAS safely in the NAS without creating a hazard to users of the NAS, or the public, or otherwise pose a threat to national security.

CONCLUSION

As set forth herein, Sky Guardian LLC seeks an exemption pursuant to 14 C.F.R. § 11.61 and Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA), which will permit safe operation of the Phantom 2 UAS commercially, without an airworthiness certificate, for the limited purpose of conducting aerial acquisitions over certain rural areas of the United States. By granting this Petition, the FAA Administrator will be fulfilling the Congressional mandate of the FAA Modernization and Reform Act of 2012, while also advancing the interests of the public, by allowing Sky Guardian LLC to safely, efficiently, and economically operate the Phantom 2 UAS commercially within the NAS.

WHEREFORE, in accordance with the Federal Aviation Regulations and the FAA Modernization and Reform Act of 2012, Section 333, Sky Guardian LLC respectfully requests that the Administrator grant this Petition for an exemption from the requirements of 14 C.F.R Sections 61.113(a) & (b), 91.7(a), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) & (a)(2), and 91.417(a) & (b), and permit Sky Guardian LLC to operate the Phantom 2 UAS for the purpose of conducting aerial acquisitions and research over certain rural and populated areas of the United States.

Dated: XXXXXXXXX
Respectfully submitted,
Sky Guardian LLC

/s/ Richard F. Soto

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