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

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

May 29, 2015

Exemption No. 11714
Regulatory Docket No. FAA–2015–0808

Mr. Ian J. Lis, Esq.
Counsel for Sky Scape Industries, LLC
Tripp Scott
110 Southeast Sixth Street, Fifteenth Floor
Fort Lauderdale, FL 33301

Dear Mr. Lis:

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 March 26, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Sky Scape Industries, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct real estate, yacht, resort, and event marketing photo and video media; survey-grade construction mapping and monitoring; and search and rescue operations.

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 are a DJI Phantom, DJI Phantom 2 Vision+, DJI Inspire, DJI S900, and DJI S1000.

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

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

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

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Sky Scape Industries, 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)

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

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 Scape Industries, 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, DJI Phantom 2 Vision+, DJI Inspire, DJI S900, and DJI S1000 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 May 31, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

Ian J. Lis, Esq.
Direct Dial: 954.765.2902
Email: ijl@trippscott.com

March 26, 2015

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

Re: **Sky Scape Industries, LLC - Petition for Exemption to Operate Unmanned Aircraft Systems Pursuant to Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations**

Dear Sir or Madam:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95 (2012) ("Section 333") and the general exemption authority of the Federal Aviation Administration ("FAA") under 49 U.S.C. § 44701(f), and through the undersigned counsel, Sky Scape Industries, LLC ("Petitioner") hereby petitions for exemptions from Federal Aviation Regulations ("FARs") 14 C.F.R., Part 21, 14 C.F.R. §§ 61.113(a) and (b), 61.133(a), 91.7(a), 91.9(b)(2), 91.103(b)(1), 91.119(c), 91.121, 91.151, 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b).

The contact information of Petitioner is
Sky Scape Industries, LLC
Attn: Nathan A. Ernst, President
205 Route 47 South
Cape May Court House, New Jersey 08210
Phone: (609) 675-8369
Email: nernst@skyscapeinds.com

Petition Summary

Pursuant to 14 C.F.R Part 11, the following summary is provided for publication in the Federal Register, should it be determined publication is needed:

Petitioner requests an exemption that would allow the commercial operation of small, unmanned aircraft systems ("UAS") weighing 55 pounds or less equipped for the purpose of creating real estate, yacht, resort, and event marketing photo and video media; conducting survey-grade construction mapping and monitoring; and performing search and rescue operations in conjunction with law enforcement personnel. Petitioner's UAS pilot in command ("PIC") holds a private pilot's license, a commercial pilot's license and a second class medical certificate. The

requested exemption should be granted because operation of the proposed small UAS pursuant to the strict conditions outlined below will provide an equivalent level of safety as Congress intended. Petitioner will operate the following UAS: DJI Phantom, DJI Phantom 2 Vision+, DJI Inspire, DJI S900, DJI S1000. Petitioner's lightweight UAS are far safer than conventional flight operations containing flight crew and passengers. Petitioner's UAS are small and will operate at slow speeds, close to the ground, far from airports in low-risk, low-population environments. They will operate only in line of sight within a restricted environment. In addition, the PIC's substantial experience favors granting of the exemption. Petitioner's UAS will carry no passengers, have enhanced safety measures, and operate under the specific guidelines and specifications outlined herein. Accordingly, Petitioner respectfully requests that the FAA grant the requested exemption without delay.

The Petitioner requests exemption from the following rules: 14 C.F.R., Part 21, 14 C.F.R. §§ 61.113(a) and (b), 61.133(a), 91.7(a), 91.9(b)(2), 91.103(b)(1), 91.119(c), 91.121, 91.151, 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b).

Petitioner's UAS

The requested exemption will permit the operation of five small unmanned rotorcraft: the DJI Phantom, the DJI Phantom 2 Vision+, the DJI Inspire, the DJI S900, and the DJI S1000. Each UAS is equipped with either the A2 Flight Controller or the NAZA-M Flight Controller computer system. All UAS provide the following functions: three (3) redundant modes of autopilot, enhanced fail safe (return-to-home) technology, low voltage protection, S-Bus receiver support, PPM receiver support, and 2-axle Gimbal support. Petitioner's UAS use a radio frequency spectrum for operation and control that complies with the Federal Communications Commission ("FCC") requirements. The FAA has recently granted Section 333 exemptions for several DJI UAS, including the DJI Phantom 2 Vision +. *See, e.g.*, Grants of Exemption 11138, 11195, and 11191. For additional information, please refer to the manuals for each of the aforementioned UAS and Flight Controller systems attached hereto as exhibits.

Petitioner's UAS will 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 will be as large as practicable in accordance with § 45.29(f).

Flight Conditions and Operations

The UAS will be flown in airspace under 400 feet above ground level and under controlled conditions. At least 85% of Petitioner's UAS operations will occur below 150 feet above ground level. If Petitioner intends to operate within five (5) miles of any active landing strip or airport, Petitioner will follow proper FAA procedure, notifying the FAA in advance of operation and when operation is complete.

Petitioner's pilot in command ("PIC") holds a private pilot's license, commercial pilot's license, and a FAA second class medical certification. The PIC will always make a safety assessment of the risk of every operation and will only operate UAS when the PIC determines no undue hazards exist. The PIC will operate all UAS with instruments of first-person-view of the UAS

and maintain constant GPS communication and flight telemetry data. A minimum of one (1) visual observer will be required to be in line of sight of the UAS at all times to further watch for intrusions into the area from individuals and other aircraft. All visual observers have experience flying radio-controlled aircraft. The PIC and visual observer will be in constant communication through at least one (1) of the following methods: cellular phone communication (constant open call during flight); two-way radio communication; or verbal communication. No UAS flight will exceed line-of-sight distance of the PIC and visual observer at any time.

All UAS will be flown on private property with the consent of the landowner. Petitioner will protect the privacy of all involved and non-involved parties present during the use of the UAS. Petitioner will obtain consent and permission from any party filmed or photographed and will not film or photograph any party that has not provided consent. The visual observer will be on the lookout for any trespassers so all operations can be quickly stopped if an unauthorized person comes within range of the UAS.

For each UAS use, flights will be logged in a traditional pilot log-book. Records from each UAS use are further documented through an electronic invoice/billing system that records the date of each UAS flight and associated payments. Petitioner will follow the procedures for start-up set forth in the manual for each UAS. Additionally, Petitioner will perform a site inspection before each flight to determine additional measures that may be necessary to safely operate the UAS. Petitioner will further perform a pre-flight communications check to make sure the PIC, visual observer, and UAS can remain in contact.

Public Interest

One of Petitioner's proposed uses of the UAS under this application is for search-and-rescue missions ("SAR"). Petitioner will contract with law enforcement personnel for UAS SAR. The UAS used in SAR operations may be equipped with additional UAS SAR technology including heat-scanning or infrared and night-vision camera systems. SAR missions can be extremely costly for law enforcement with traditional fixed-wing aircraft and helicopters. With Petitioner's UAS, small highly maneuverable unmanned UAS will aid and support search efforts for a fraction of the cost, risk, and resources. The UAS SAR could also be used to "drop in" supplies, including a radio, GPS locator, medical supplies or water, to a stranded victim in an otherwise unreachable location before rescue crews are able to safely extract the victim. Petitioner's use of UAS in SAR operations is a valuable asset to public safety.

Aircraft and Equivalent Level of Safety

Petitioner proposes that the exemption requested herein apply to UAS that have the characteristics and that operate within the limitations outlined herein. These limitations provide for at least an equivalent or greater level of safety to operate under the current regulations.

Petitioner agrees to the following limitations and conditions with conducting its commercial UAS operations under an FAA exemption:

1. All UAS will weigh no more than 55 pounds.
2. All UAS will be operated within line of sight of the PIC and visual observer.

3. The maximum total flight time for each UAS flight will conclude upon the earlier of thirty (30) minutes or until 25% of UAS battery remains.
4. The UAS will be operated at an altitude of no more than 400 feet above ground level.
5. The PIC will hold a pilot's license and second class medical certification.
6. The minimum crew for each UAS flight will be the PIC and one visual observer.
7. The crew for each operation will at all times be able to communicate by voice or through radio or cellular devices.
8. Written or oral permission will be obtained from the landowners or their authorized agents of the land over which all flights will occur.
9. All necessary permissions and permits will be obtained from all appropriate local governmental agencies.
10. All UAS will have the capability to abort a flight in case of unexpected obstacles or emergencies.
11. All UAS will be equipped with enhanced failsafe (return-to-home) technology.
12. No UAS operations will present any national security issue.
13. Petitioner will obtain an Air Traffic Organization issued Certificate of Waiver or Authorization ("COA") prior to conducting any operations under this grant of exemption. In fulfilling the requirements of the COA, Petitioner will be required to request a Notice to Airmen ("NOTAM") not more than 72 hours in advance, but not less than 48 hours prior to operation.

Satisfaction of Section 333's criteria (size, weight, speed, operating capabilities, proximity to airports and populated areas, operation within line of sight and national security) provide an adequate justification for the grant of the exemptions requested herein allowing Petitioner's commercial operation of UAS for the purpose of creating real estate, yacht, resort, and event marketing photo and video media; conducting survey-grade construction mapping and monitoring; and performing search and rescue operations in conjunction with law enforcement personnel.

Statutory Authority for Exemption

Section 333, in reference to 49 U.S.C. § 44704, provides a mechanism for expedited operational authorization for the use of safe civil UAS operations in the National Airspace System ("NAS"). Specifically, Section 333(a) states that the FAA "shall determine if certain unmanned aircraft systems may operate safely in the national airspace system before completion" of final rulemaking. If the Secretary of Transportation determines that certain UAS "may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft in the national airspace system. § 333(c). The FAA Administrator also has the general authority to grant an exemption if the Administrator finds the exemption to be in the public interest. 49 U.S.C. § 44701(f). The Federal Aviation Act (the "Act") expressly grants the FAA the authority to issue exemptions for exempt civil aircraft, as defined by § 40101 of the Act, which includes an exemption for small UAS from the requirement that all civil aircraft have a current airworthiness certificate.

Requested Exemptions

Petitioner respectfully requests relief from the following regulations:

14 C.F.R. Part 21 prescribes, in pertinent part, the procedural requirements for issuing and changing design approvals, production approvals, airworthiness certificates, and airworthiness approvals.

The Act and Section 333 both authorize the FAA to exempt aircraft from the requirement of an airworthiness certificate upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UAS. It is clear that Petitioner's UAS may be operated without an airworthiness certificate, in the restricted environment and under the conditions proposed in a manner as safe or safer than a conventional aircraft operating with an airworthiness certificate without the restrictions and conditions proposed.

The small UAS to be operated hereunder (i) are less than 55 pounds fully loaded, (ii) carry neither pilot nor passengers; (iii) carry no explosive materials or flammable liquid fuels; and (iv) operate exclusively within a secured area. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator and in compliance with local public safety requirements. The FAA will have advance notice of all operations. Application of these criteria demonstrate there is no credible threat to national security posed by the UAS based on its size, speed and location of operation, lack of explosive materials, and inability to carry a substantial external load.

61.113(a) and (b) prescribes that "no person who holds a private pilot certificate may act as a pilot in command of an aircraft that is carrying passengers or property for compensation or hire; nor may that person, for compensation or hire, act as pilot in command of an aircraft," and that "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."

61.133(a) sets forth privileges for persons holding commercial pilot certificates, including a provision that limits the ability to act as PIC of an aircraft for compensation or hire to persons holding a commercial pilot certificate.

Petitioner's UAS operations will be limited to restricted conditions and a controlled environment. The PIC will hold both his private and commercial pilot's license, giving him extensive knowledge based on his experience and the exams and courses required to obtain his pilot's licenses. Additionally, while the UAS will be operated in connection with Petitioner's business, no passengers or cargo will be transported. Petitioner believes these factors warrant relief from 61.113 (a) and (b) and 61.133(a).

91.7(a) prescribes that no person may operate a civil aircraft unless it is in an airworthy condition.

As there will be no airworthiness certificate issued for the UAS should this exemption be granted, no standard will exist for determining airworthiness. Petitioner will keep all UAS maintenance and safety information at the pre-determined ground station, where it will be readily accessible to the PIC and visual observer. Based on the documents available at the ground station, the PIC will be able to make a determination as to the airworthiness of the UAS.

91.9(b)(2) prohibits the operation of U.S.-registered civil aircraft 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.

Based on the FAA's Memorandum dated August 8, 2014, Petitioner does not believe exemption from 91.9(b) or 91.203(a) and (b) is necessary. However, to the extent the FAA deems an exemption from these sections necessary for Petitioner's proposed operations, such exemptions should be granted. Petitioner's UAS are too small to safely carry the required manuals and placards. Additionally, as the UAS are unmanned, the manuals and other required information is more useful to the PIC at ground control.

91.103(b)(1) prescribes, in pertinent part, that each PIC shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include— (a) For a flight under instrument flight rules (IFR) or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the PIC has been advised by air traffic control (ATC); (b) For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information: (1) 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; and (2) For civil aircraft other than those specified in paragraph (b)(1) of this section, other reliable information appropriate to the aircraft, relating to aircraft performance under expected values of airport elevation and runway slope, aircraft gross weight, and wind and temperature.

Petitioner will comply with all applicable requirements of 91.103(a) and (b) and requests relief from 91.103(b)(1). The PIC will review weather, flight and battery requirements, UAS performance data, and appropriate landing and takeoff distances before each flight. Any risks presented will be mitigated by the PIC's ability to see all nearby air traffic and activate the UAS return-to-home procedures if necessary.

91.119(c) prescribes that, "[e]xcept 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."

Due the nature of Petitioner's UAS activities filming and photographing, Petitioner requests relief from 91.119(c) with respect to participating persons, vehicles, and structures directly involved in Petitioner's operations. Each UAS manual sets forth safety factors that will be used

to ensure safe operation when in proximity to consenting participants. Petitioner will ensure that no UAS are operating within 500 feet of non-participating persons.

91.121 requires, in pertinent part, each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "to the elevation of the departure airport or an appropriate altimeter setting available before departure."

Petitioner will not have a typical barometric altimeter on board the UAS. Instead, altitude information is provided to the UAS PIC through a digitally encoded telemetric data feed, which downlinks from the aircraft to an on-screen display on the ground. Prior to each flight, a zero altitude initiation point will be established and confirmed for accuracy by the PIC.

91.151 prescribes, in pertinent part, that "(a) No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed— (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes. (b) No person may begin a flight in a rotorcraft under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 20 minutes."

91.151 provides for a safety reserve of fuel so that aircraft may timely land when fuel is running low. Petitioner will operate UAS until the earlier of a maximum of thirty (30) minutes or when 25% of battery remains. All UAS are additionally equipped with a low battery failsafe that allow the UAS to safely land when little battery remains. The UAS are not propelled by fuel and will operate only within the safety constraints of the UAS battery life.

91.203(a) prohibits, in pertinent part, any person from operating a civil aircraft unless it has within it "(1) an appropriate and current airworthiness certificate [. . . and] (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)."

91.203(b) prescribes, in pertinent part, that "no person may operate a civil aircraft unless the airworthiness certificate or a special flight authorization issued under § 91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew."

91.405(a) requires, in pertinent part, that an aircraft operator or owner shall have that 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.

91.407(a)(1) prescribes that no person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless it has been approved for return to service by a person authorized under § 43.7 of the same chapter.

91.409(a)(2) prescribes, in pertinent part, that no person may operate an aircraft unless, within the preceding 12 months, it has had an inspection for the issuance of an airworthiness certificate in accordance with Part 21 of the same chapter.

91.417(a) and (b) prescribes, in pertinent part, that each registered owner or operator "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 that 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) 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 shall be retained until the defects are repaired and the aircraft is approved for return to service."

Petitioner will comply with safety and maintenance procedures included in all UAS manufacturer's instructions and operating manuals. If necessary, Petitioner will develop and document additional maintenance protocols to ensure the highest level of safety. Therefore, Petitioner's exemption from 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b) is warranted.

Conclusion

This Petition for Exemption demonstrates the appropriate safeguards and criteria that Congress articulated in Section 333 including weight, speed, operating capabilities, proximity to airports and populated areas, operation within VLOS and national security concerns. The proposed UAS operations will benefit the public as a whole by reducing human exposure to the risks associated with manned aircraft performing the activities. The public will also benefit from Petitioner's search and rescue operations. In consideration of the foregoing, this Petition for Exemption provides the FAA with more than adequate justification to allow commercial operation of Petitioner's small UASs for the purpose of creating real estate, yacht, resort, and event marketing

photo and video media; conducting survey-grade construction mapping and monitoring; and performing search and rescue operations in conjunction with law enforcement personnel.

We appreciate your prompt consideration of our requested exemptions. Should you have any questions, or if you need any additional information to support the requested exemptions, please do not hesitate to contact the undersigned.

Respectfully submitted,

Ian J. Lis, Esq.
Tripp Scott, P.A.
Counsel for Petitioner Sky Scape Industries, LLC

Exhibits

Manuals:
DJI Phantom
DJI Phantom 2 Vision+
DJI Inspire
DJI S900
DJI S1000
A2 Flight Controller
NAZA-M Flight Controller