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

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

August 17, 2015

Exemption No. 12483
Regulatory Docket No. FAA–2015–0670

Mr. David Topping
dba The Topping Group
77 Madeira Court
St. Charles, MO 63304

Dear Mr. Topping:

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 letters dated March 9 and July 8, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of The Topping Group (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography.

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 Inspire 1.

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, The Topping Group 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

[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.

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, The Topping Group 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 Inspire 1 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 August 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave. S.E.
Washington, D.C. 20590

March 9, 2015

Re: Request for Exemption under Section 333 of the FAA Modernization and Reform

Dear Sir or Madam:

David Topping, doing business as the Topping Group, seeks an exemption from certain Federal Aviation Regulations (FARs) pursuant to Section 333 of the FAA Modernization and Reform Act and Part 11 of Title 14 of the C.F.R.

For more than 25 years The Topping Group has specialized in video production for corporate and industrial clients. The Topping Group will provide low altitude commercial aerial photography and video services utilizing a Small Unmanned Aircraft System.

This exemption request should be granted because the use of the aircraft utilized by The Topping Group under the conditions and limitations proposed below will meet or exceed the level of safety Congress has intended. The DJI Phantom 1 weighs 3.3 pounds when outfitted with camera, gimbal and transmitter. For commercial work, the wide angle lens of the GoPro camera works best at low altitudes – typically less than 200 feet. This lightweight aircraft is far safer than the alternative for aerial photography: manned aircraft, or heavier single rotor radio controlled gas powered helicopters.

Safety is a paramount goal. All flights will be in daylight, below 400 feet, and more than five miles from an airport. All flights will be conducted by a two-man crew: a pilot who will maintain visual line-of-sight with the helicopter, and a director who will monitor the video recordings or still photography via transmitter. No flights shall begin unless the aircraft has first acquired adequate satellite signals for GPS aided flight and failsafe return.

The name of applicant is: David Topping

David Topping d.b.a. The Topping Group
77 Madeira Court
St. Charles, MO 63304

www.thetoppinggroup.com (314) 852-7473

Docket Operations, M-30
U.S. Department of Transportation
1200 New Jersey Avenue, SE Room W12-140
West Building Ground Floor
Washington DC 20590-0001

July 8, 2015

Re: Exemption Request Section 333 of the FAA Reform Act of the Federal Aviation Regulations from part 21, subpart H; and Sections 45.23(b), 91.7(a), 91.9(b)(2), 91.119, 91.121, 91.151 (a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR).

Dear Sir or Madam,

Thank you for responding to my earlier exemption request (No. FAA-2015-0670.) I am following up with this letter to provide additional detail regarding my exemption request.

I am writing pursuant to the FAA Modernization and Reform Act of 2012 and the procedures contained within 14 C.F.R. 11, to request that Dave Topping of the Topping Group, an owner of an unmanned aircraft system (UAS) be granted exemption from the Federal Aviation Regulations (FARS) listed within so that I may operate my UAS commercially in airspace regulated by the Federal Aviation Administration.

This exemption would allow operation of my UAS for the purpose of commercial aerial photography and aerial videography for corporate and industrial clients.

The Topping Group owns a DJI Inspire1 (4) blade quad copter weighing 6 lbs. 7.5 ounces. The UAS has a maximum airspeed of 30 knots. Using remote controller operating on frequency 5.728-5.850GHZ /2.400-2.483GHZ. The Inspire 1 is equipped with built in ground support technology that allows it to fly utilizing GPS for stability, tracking, safe flight mode and return to home feature in the event of loss of remote control signal or critical low battery. All flights start with a pre-flight safety check and all flight data are recorded. The Inspire1 is equipped with a fixed position camera that sends a live video signal to the controller allowing the (PIC) person in control to monitor real time video. Flight data, speed height, distance, battery level and general aircraft conditions are also displayed during operation. The Inspire1 battery has a flight time in excess of 12 minutes and every flight is programmed to return to original take off point and always flown utilizing VLOS. I have approximately 30 hours of experience with the Phantom 1 system, and have now logged more than 15 hours with the Inspire1 UAS. I believe the Inspire1 is far superior in flight, safety and reliability. This lightweight aircraft is far safer than the alternative for aerial photography - manned aircraft, or heavier single rotor radio controlled gas powered helicopters.

The Topping Group will abide by the following additional operating conditions under this exemption, which ensures a high level of safety during UAS flight.

- Operate UAS below 400 feet and within a radius of 1000 feet from PIC.
All flights will be conducted by a two-man crew: a PIC who will maintain visual line-of-sight (VLOS) with the helicopter, and a director who will monitor the video recordings or still photography via transmitter.
- Obtain permission from the owner/controller of any vessels, vehicles and structures when operations may be conducted closer than 500 feet to any such vessels, vehicles or structures; we will conduct a safety assessment of the risk of operating closer to those objects and determine that it does not present an undue hazard.
- Operate the UAS for 8-12 minutes per flight.
- Land UAS prior to the manufacturer's recommended minimum level of battery power.
- Operate UAS during daylight hours only within visual line of sight (VLOS)
- Utilize the UAS' global positioning system (GPS) flight safety feature whereby it hovers and then slowly lands if communication with the remote control pilot is lost or battery becomes critically low.
- Always obtain all necessary permissions prior to operation
- Have procedures in place to abort flights in the event of safety breaches or potential danger.
- Review weather reports prior to flight and never operate UAS in unsafe conditions, high wind, low clouds or conditions that hinder visibility.
- Never operate within 5 miles of an airport.
- Only operate in safe environments that are strictly controlled, are away from power lines, elevated lights, and densely populated areas (defined by areas depicted in "yellow" on VFR charts and through obtaining information regarding congested areas from the local Flight Standards District Office (FSDO);
- Also conduct extensive preflight inspections and protocols, during which safety carries primary importance

The PIC will also have a minimum of 15 hours logged on this craft and 30 hours minimum flying UAS quad copters under varying conditions and environments and will follow all safety protocol of The Topping Group as well as guidelines of 14 C.F.R 61.51 (b) having the ability to safely operate the UAS in a manner consistent with the operating documents, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures as outlined.

Specific Exemptions Requested Given the size, weight, speed, and limited operating area associated with the UA, I feel an exemption from 14 CFR part 21, Subpart H (Airworthiness Certificates) and § 91.203(a) and (b) (Certifications required), subject to certain conditions and limitations, is warranted and meets the

requirements for an equivalent level of safety under 14 CFR part 11 and Section 333 of P .L. 112-95 (Section 333).

I request an exemption from § 45.23 Marking of the aircraft because the UAS will not have a cabin, cockpit or pilot station on which to mark certain words or phrases. The two-inch lettering is difficult to place on such a small aircraft with dimensions smaller than the minimal lettering requirement. Regardless of this, I can mark the UAS in the largest possible lettering by placing the word "Experimental" on its fuselage as required by § 45.29(f) so that anyone will see the markings.

I request an exemption from § 91.7(a) which prohibits the operation of an aircraft without an airworthiness certificate, since there is currently no certificate applicable to our operation, this regulation is inapplicable.

I request an exemption from§§ 91.405(a), 91.407(a)(1), 91.409(a)(2) and 91.417(a) and (b) Maintenance inspections since they only apply to aircraft with an airworthiness certificate. However, as a safety precaution I will perform a preflight inspection of the UAS before each flight as outlined in the attached operating documents.

I request an exemption from§ 91.9(b)(2) which requires an aircraft flight manual in the aircraft, however since there are no pilots or passengers on board the aircraft and given its size, this regulation is inapplicable. We believe an equivalent level of safety will be achieved by maintaining a safety/flight manual with the UAS ground station.

I request an exemption from § 91.119 which prescribes safe altitudes for the operation of civil aircraft, but it allows helicopters to be operated at lower altitudes in certain conditions. I will not operate our UAS above the altitude of 400 feet above ground level (AGL) and will also only operate in safe areas away from the public and traffic, thus "providing a level of safety at least equivalent to or below those in relation to minimum safe altitudes." Given the size, weight, maneuverability, and speed of the UAS, an equivalent or higher level of safety will be achieved.

I request an exemption from § 91.121 Altimeter settings as it is inapplicable since the Inspire1 UAS utilizes electronic GPS with a barometric sensor.

I request an exemption from § 91.151 (a) Fuel requirements for flight in VFR conditions. The UAV is 100% electric and two low battery alerts are issued - per the operating documents, the UAV will be landed at the first alert. Also, our flights will last only 8-12 minutes each, and the UAS has an automated function, which results in immediate landing when a low battery is detected. The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough power to fly to the first point of intended landing and, assuming normal

cruising speed, land the UA with 30% battery power remaining.

Public Interest:
Aerial videography for commercial use has been around for a long time through manned fixed wing aircraft and helicopters, but for small business owners, its expense has been cost-prohibitive. By granting this exemption I would be able to provide this service at a much lower cost.

Further, the small UAS will pose minimal threat to the public given its small size and lack of combustible fuel when compared to larger manned aircraft, or single rotor gas powered models.

Summary:
The Topping Group will comply with all of the following conditions and limitations should this grant of exemption be provided:

1) Operations will be limited to the following aircraft described in the operating documents which is a quad-rotor aircraft weighing less than 7 pounds:
The DJ I Inspire1 Aircraft System.
2) The UAS will not be flown at an indicated airspeed exceeding 30 knots.
3) The UAS will be operated at an altitude of no more than 400 feet above ground level (AGL), as indicated by the procedures specified in the operating documents. All altitudes reported to ATC must be in feet AGL.
4) The UAS will be operated within visual line of sight (VLOS) of the Pilot In Command (PIC) at all times.
5) All operations will utilize a visual observer (VO). The UA will be operated within the visual line of sight (VLOS) of the VO at all times. The VO and PIC will be able to communicate verbally at all times. The PIC will be designated before the flight and will not transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions prescribed in the operating documents.
6) The operating documents will be accessible during UAS operations and made available to the Administrator upon request. Any revisions to the operating documents will be presented to the Administrator upon request.
7) Prior to each flight, the PIC will inspect the UAS to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UAS, the UAS will not be operated until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight. The Ground Control Station will be included in the preflight inspection. All maintenance and alterations will be properly documented in the aircraft records.
8) Any UAS maintenance or alterations that affect the UAS operation or flight characteristics, e.g. replacement of a flight critical component, will undergo a functional test flight. The PIC who conducts the functional test flight will make an entry in the aircraft records.
9) The pre-flight inspection section in the operating documents will account for all discrepancies, i.e. inoperable components, items, or equipment, not already

covered in the relevant sections of the operating documents.
1 0) I will follow the UAS manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements.
11) I will carry out maintenance, inspections, and record keeping requirements, in accordance with the operating documents. Maintenance, inspection, and alterations will be noted in the aircraft records, including total flight hours, description of work accomplished, and the signature of the authorized person returning the UAS to service.
12) Each UAS operated will comply with all manufacturer Safety Bulletins.
13) An authorized person will make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.
14). The PIC will also meet the flight review requirements specified in 14 CFR 61.56 in an aircraft in which the PIC is rated on.
15) Prior to operations conducted for the purpose of aerial videography/cinematography (or similar operations), the PIC will have accumulated and logged, in a manner consistent with 14 CFR 61.51 (b),
16) Prior to operations conducted for the purpose of aerial videography/cinematography (or similar operations), the PIC will have accumulated and logged, in a manner consistent
with 14 CFR 61.51 (b), a minimum of 5 hours as UAS pilot operating the make and model of the UAS to be used in operations.
17) The PIC will not operate the UAS for the purpose of aerial videography/cinematography and augmenting real estate listing videos (or similar operations), unless the PIC has demonstrated and logged in a manner consistent with 14 CFR 61.51 (b), the ability to safely operate the UAS in a manner consistent with the operating documents, including evasive and emergency maneuvers and maintaining appropriate distances from
people, vessels, vehicles and structures.
18) UAS operations will not be conducted during night, as defined in 14 CFR 1 .1. All operations will be conducted under visual meteorological conditions (VMC).
19) The UAS will not operate within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart.
20) The UAS will 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.
21) If a UAS loses communications or loses its GPS signal, it will return to a predetermined location within the planned operating area and land or be recovered in accordance with the operating documents.
22) The PIC will abort a flight in the event of unpredicted obstacles or emergencies in accordance with the operating documents.
23) The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough power to fly at normal cruising speed to the intended landing point and land the UA with 30% battery power remaining.
24) I will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations, and also request a Notice to Airman (NOT AM) not more than 72 hours in advance, but not less than

48 hours prior to the operation.
25) Before conducting operations, the radio frequency spectrum used for operation and control of the UA will comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.
26) The documents required under 14 CFR 91.9 and 91.203 would be available to the PIC at the Ground Control Station of the UAS any time the UAS is operating. These documents will be made available to the Administrator or any law enforcement official upon request.
27) The UAS will remain clear and yield the right of way to all manned aviation operations and activities at all times.
28) The UAS will not be operated by the PIC from any moving device or vehicle.
29) The UAS will not be operated over congested or densely populated areas.
30) Flight operations will 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. We will 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 and/or;
b. The aircraft is operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission 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, and;
c. Operations nearer to the PIC, VO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).
31) All operations will be conducted over private or controlled-access property 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.
32) Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA will be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents will be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

For more than 25 years The Topping Group has specialized in video production for corporate and industrial clients, including various defense contractors. Some of our shooting locations have included military installations and missile firing ranges. We have always adhered to a "safety first" culture, and will continue to do so. On behalf of the Topping Group I would like to thank you for your consideration in granting this exemption.

David Topping

David Topping dba The Topping Group
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