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

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

July 27, 2015

Exemption No. 12174
Regulatory Docket No. FAA–2015-1851

Mr. Mark E. McKinnon
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McKenna Long & Aldridge
1676 International Drive, Penthouse
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Mr. Matthew J. Clark
Counsel for Cable News Network, Inc.
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Dear Mr. McKinnon and Mr. Clark:

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 May 11, 2015 and July 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Cable News Network, Inc. (CNN) (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, aerial videography, and closed-set motion picture and television filming.

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. However, the FAA received one comment from an individual in support of the petition made to the docket.

**Airworthiness Certification**

The UAS proposed by the petitioner are the 3DR Solo, AirRobot AR180, DJI Inspire 1, DJI Phantom 2 Vision, and Altus Delta X-8.[1]

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 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 and closed set motion picture and filming.[2] 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;

[1] The petitioner also proposed to operate the Drone Aviation Corporation's Watt 200 ETAP and the CyPhy Works Persistent Aerial Reconnaissance and Communication System (PARC), which are tethered unmanned aircraft. The FAA is reviewing the aircraft separately to evaluate the risk associated with tethered UAS operations and to determine whether any additional mitigations are necessary. The FAA will issue its decision after completing its assessment of that portion of the petitions. No further action will be required by the petitioner.

[2] 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 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, Cable News Network, Inc. (CNN) 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 and closed set motion picture and filming. This exemption is subject to the conditions and limitations listed below.

**Conditions and Limitations**

In this grant of exemption, Cable News Network, Inc. (CNN) 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 3DR Solo, AirRobot AR180, DJI Inspire 1, DJI Phantom 2 Vision, and Altus Delta X-8 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 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 July 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

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May 11, 2015

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

Re: Petition of Cable News Network, Inc. (CNN) for Grant of Exemption Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012

To Whom it May Concern:

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (Reform Act) and 14 C.F.R. Part 11, Cable News Network, Inc. (CNN), hereby applies for an exemption from the Federal Aviation Regulations (FARs) identified below, to operate small unmanned aerial vehicles (*i.e.*, small unmanned aircraft systems or UAS) for aerial data collection. The data will be used in support of CNN's newsgathering and reporting activities. CNN respectfully submits that this Petition for Exemption qualifies for approval, as the Federal Aviation Administration (FAA) has previously issued grants of exemption in circumstances similar in all material respects to those presented herein.

In addition to this Petition for Exemption, CNN will also submit the following supporting documents (hereinafter referred to as "operating documents"):

- CNN UAS Operations Manual
- 3DR Solo Aircraft Description and Operations Manual
- Drone Aviation Corp. Watt 200 ETAP Manual

CNN submits these materials as confidential documents under separate cover pursuant to 14 C.F.R. § 11.35(b), as the materials contain confidential commercial and proprietary information that CNN has not and will not share with others. The information contained in these documents is not generally available to the public and is protected from release under the Freedom of Information Act, 5 U.S.C. § 552 *et seq.*

For your convenience, this Petition is organized as follows:

## I. BACKGROUND & DESCRIPTION OF PETITIONER

CNN Worldwide is a portfolio of two dozen news and information services across cable, satellite, radio, wireless devices and the Internet in more than 200 countries and territories worldwide. Domestically, CNN reaches more individuals on television, the web and mobile devices than any other cable TV news organization in the United States. Internationally, CNN is the most widely distributed news channel reaching more than 271 million households abroad. CNN Digital is a top network for online news, mobile news and social media. Additionally, CNN Newsource is the world's most extensively utilized news service partnering with hundreds of local and international news organizations around the world. CNN is a division of Turner Broadcasting System, Inc., a Time Warner Company.

A vital aspect of media production is new and interesting understanding of everyday events. Production companies go to considerable effort and expense to place cameras on airplanes and helicopters to show audiences a "bird's eye view" establishing shot. News production is no different, and news stations often use helicopters to report on news events. While effective in obtaining aerial imagery, manned aircraft are expensive to operate and difficult to coordinate on short notice. A UAS can perform these tasks more effectively, and with less risk and expense, making it feasible for mobile news vans to be equipped with them for on-the-spot aerial coverage.

CNN recognizes that UAS will have an enormous impact on news production, and for that reason, CNN has been actively involved in efforts to evaluate the technology, personnel and safety needs to operate UAS effectively in the national airspace system (NAS). CNN and researchers at the Georgia Institute of Technology have entered into a joint a Cooperative Research and Development Agreement (CRDA) with the FAA to advance integration of UAS into the NAS for newsgathering and reporting. The research initiative aims to better understand the opportunities UAS present for media organizations, and to explore the access and safety issues that need to be addressed as part of any new regulatory framework. Consistent with these continuing efforts to develop new and innovative ways for media outlets to safely and effectively use UAS, CNN seeks an exemption to operate UAS for aerial data collection in support of its newsgathering and reporting activities.

In accordance with 14 C.F.R. § 11.81(a), CNN provides the following information in support of its Petition for Exemption.

The contact information for Petitioner is as follows:

Emily Avant, Counsel
Turner Broadcasting System, Inc.
One CNN Center, Suite NT1305B
Atlanta, Georgia 30303
Phone: (404) 827-5962
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## II. DESCRIPTION OF PROPOSED OPERATION

CNN seeks an exemption pursuant to Section 333 of the Reform Act to use a number of different UAS. Most of these UAS have already been approved for commercial use in other Grants of Exemption, including the AirRobot AR180, DJI Inspire 1 and DJI Phantom 2 Vision. CNN also seeks permission to utilize the 3DR Solo and the Drone Aviation Corporation's Watt 200 ETAP. As set forth below, these vehicles meet the criteria established in Section 333 of the Reform Act and are suitable platforms for the conduct of aerial photography and videography in support of the television, print and online news industry.

CNN is committed to maintaining the highest standards of flight safety, and has experience conducting UAS operations abroad. CNN will leverage its knowledge and experience to create the safest possible American UAS operation. As part of these overseas operations, CNN has a well-defined system of operating procedures and crew standards that are incorporated into CNN's Remotely Piloted Aircraft System (RPAS) Operations Manual. CNN has used this RPAS Operations Manual as the core of its American UAS Operations Manual. This Manual has been further refined to address the unique aspects of UAS flight in the United States. All UAS operations will be performed in accordance with the accompanying CNN operating documents, and in accordance with the requirements of an applicable Certificate of Waiver or Authorization (COA).

The proposed operations in this Petition for Exemption are not new or novel to the FAA. The FAA has previously issued grants of exemption to use small UAS for aerial data collection in support of similar newsgathering and reporting activities, including:

- Exemption No. 11406 to Stringer New Services for conducting aerial photography/ videography for the television, print and online news industry (*See* Docket No. FAA-2015-0135); and

- Exemption No. 11408 issued to Arrowdata, LLC to conduct electronic news gathering (*See* Docket No. FAA-2015-0131).

The low-risk UAS operations proposed by CNN in this Petition for Exemption fall squarely within the category of aerial data collection that has been subject to previous approval.

## III. RELEVANT STATUTORY AUTHORITY

This Petition for Exemption is submitted pursuant to Section 333(a) through (c) of the Reform Act. Congress has directed the FAA "to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system." Pursuant to Section 333 of the Reform Act, the FAA Administrator is to permit unmanned aircraft systems to operate in the NAS where it is safe to do so based on the following considerations:

- The UAS's size, weight, speed and operational capability;

- Operation of the UAS in close proximity to airports and populated areas; and

- Operation of the UAS within the visual line of sight of the operator.

Additionally, the FAA Administrator has general authority to grant exemptions from the agency's safety regulations and minimum standards when the Administrator decides a requested exemption is in the public interest. *See* 49 U.S.C. § 106(f) (defining the authority of the Administrator); 49 U.S.C. § 44701(f) (permitting exemptions from §§ 44701(a), (b) and §§ 44702 – 44716, *et seq.*). A party requesting an exemption must explain the reasons why the exemption: (1) would benefit the public as a whole, and (2) would not adversely affect safety (or how it would provide a level of safety at least equal to the existing rules). *See* 14 C.F.R. § 11.81 (petitions for exemption).

## IV. CNN'S PROPOSED UAS OPERATIONS MEET THE REQUIREMENTS OF SECTION 333 OF THE REFORM ACT

CNN's proposed operations in this Petition for Exemption qualify for expedited approval pursuant to Section 333 of the Reform Act, as each of the statutory criteria and relevant factors are satisfied.

### A. Approval is Warranted Based on the UAS's Size, Weight, Speed, and Operational Capability

The FAA has already determined that three of the vehicles chosen by CNN meet the requirements of Section 333 of the Reform Act: the AirRobot AR180, DJI Inspire 1 and DJI Phantom 2 Vision.

The AirRobot AR180 is a battery operated quadcopter with an airframe weight of 6 lbs and a maximum gross takeoff weight of 14 lbs (including battery and payload). The AR180 measures 75 inches in diameter and has a maximum operating ground speed of 28 mph. The UAS uses two separate radio links for command control uplink (200 MHZ to 928 MHZ) and video/data downlink (1.2—5.8 Ghz). The FAA previously issued a grant of exemption allowing BNSF Railroad Company to operate the AirRobot AR180 for conducting railroad infrastructure inspections.[1] The FAA's analysis of the vehicle identified specific characteristics of the AirRobot AR180 that warranted its approval:

> "Each of the petitioner's UA weighs less than 19 pounds. The pilot and crew will be remotely located from the aircraft. The limited weight and construction reduces the potential for harm to persons or damage to property in the event of an incident or accident. The risk to an onboard pilot and crew during an incident or accident is eliminated with the use of a UAS for the proposed operation.[2]"

The FAA also found that the AirRobot AR180's safety features would provide an equivalent level of safety compared to conventional aircraft performing similar functions:

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[1] Exemption No. 11206 (*see* FAA Docket No. FAA-2014-0704).

[2] Exemption No. 11206 at pg. 4.

> "The petitioner's UAS has the capability to operate safely after experiencing certain in-flight contingencies or failures and uses an auto-pilot system to maintain UAS stability and control. The UAS is also able to respond to a loss of GPS or a lost-link event with a pre-coordinated, predictable, automated flight maneuver. These safety features provide an equivalent level of safety compared to a manned aircraft holding a restricted airworthiness certificate performing a similar operation."[3]

Similarly, the FAA has previously determined that a grant of exemption is appropriate for operations conducted using the DJI Inspire 1 and the DJI Phantom 2 Vision (including the Phantom 2 and Vision+ models), due to their size, weight, speed, and operational capability. *See e.g.:*

- Exemption No. 11406 to Stringer News Services (DJI Phantom 2 Vision+);
- Exemption No. 11398 to Ventus Wind, LLC (DJI Phantom 2 and DJI Inspire 1);
- Exemption No. 11394 to Cirrus Exploration Company (DJI Phantom 2 Vision+ and DJI Inspire 1);
- Exemption No. 11224 to NextEra Energy, Inc. (DJI Phantom 2 Vision+ and DJI Inspire 1);
- Exemption No. 11218 to Saratoga Aerial Vehicle (DJI Phantom 2 Vision+);
- Exemption No. 11230 to Montico, Inc. (DJI Phantom 2 Vision+);
- Exemption No. 11228 to Steven Zeets (DJI Phantom 2 and DJI Phantom 2 Vision+).

Specifically, the FAA has found the following characteristics of the DJI Phantom 2 Vision and DJI Inspire 1 to warrant approval for a grant of exemption:

- The DJI Phantom 2 Vision weighs less than 3 lbs (including the battery).
- The DJI Inspire 1 weighs less than 6 lbs (including the battery).
- Maximum flight speed for the DJI Phantom 2 Vision is 15 m/s (29 knots).[4]
- Maximum flight speed for the DJI Inspire 1 is 22 m/s (~43 knots).
- Both the DJI Inspire 1 and the DJI Phantom 2 Vision have the capability to operate safely after experiencing certain in-flight contingencies or failures and use an auto-pilot system

[3] *Id.* at pg. 5.

[4] Exemption No. 11195 to FalconSkyCam at pg. 10 (*See* Docket No. FAA-2014-0884).

to maintain UAS stability and control. The UAS are also able to respond to a loss of GPS or a lost-link event with a pre-coordinated, predictable, automated flight maneuver. These safety features provide an equivalent level of safety compared to a manned aircraft performing a similar operation and mitigate the risk of command and control link failures.[5] The Inspire 1 also has geofencing capabilities to ensure the aircraft remains within a defined area of operation.

- Altitude information will be generated by equipment onboard the UAs as specified using GPS triangulation, digitally encoded barometric altimeter, radio altimeter, or any combination thereof. This information will be transmitted to the pilot via telemetric data feed.

- The radio frequencies used for operations and control of the UAS comply with the Federal Communications Commission ("FCC") and other appropriate government oversight agency requirements. Both UAS operate within the 2.4 GHz frequency band.

In addition, CNN requests permission to operate two vehicles that have not been subject to previous Grants of Exemption: the 3DR Solo and the Drone Aviation Corporation's Watt 200 ETAP. These vehicles warrant approval for a grant of exemption.

The 3DR Solo is a battery powered quadcopter with a gross takeoff weight of 3.75 pounds. The airframe, including rotors, has a span of 26.2 inches. The UAS uses a command and control link for telemetry and video operating on 2.4 Ghz with 11 channel hopping to ensure reliability. The vehicle has a maximum ground airspeed of 30 knots, with a cruising ground speed of 5 knots. In addition, the vehicle includes a number of enhanced safety features, including:

- A choice between automatic and manual take-off and landing.

- A sophisticated system of computer assisted navigation and flight management.

- Altitude is determined based on a combination of barometers and inertial navigation.

- The ability to both return to home or return to a predetermined point that has been preselected as free from obstructions or hazards.

- The ability to set custom battery charge warning levels and to set either an automatic return to home or return to a preset location in the event of a low battery.

- Tactile feedback in the controller when warnings are given to alert the pilot to certain conditions such as low battery.

- Programmable geo-fencing capabilities allowing the creation of a virtual "safety fence."

[5] *Id.* at pg. 3.

The Watt 200 ETAP is a unique vehicle that draws its power from equipment on the ground. It has an empty take-off weight of 16 pounds, with a maximum take-off weight of under 22 pounds. The vehicle employs eight electric motors in a quadcopter layout. The vehicle also has the following safety features:

- The tether is made from a Kevlar armored structure that has a breaking point in excess of 600 pounds of force.
- The vehicle is controlled through signals transmitted through the tether and is therefore immune to lost link.
- The maximum altitude of the vehicle can be preset through customizing the tether length, and the controller know the altitude based on the amount of tether released, making the vehicle immunize from issues related to GPS signal reliability.
- Because the vehicle's power is supplied by the tether, a fly-away event is impossible. In the unlikely event the tether is broken, the aircraft institutes an immediate auto-landing. The vehicle is equipped with sufficient battery power to safely conduct this maneuver.
- The vehicle is able to automatically compensate for an engine failure and land safely.

If a full-sized helicopter were used to report similar news events, the aircraft's take-off weight would likely exceed 6,000 pounds. The difference in weight between Petitioner's extremely lightweight UAS (which carry no passengers, crew, or flammable fuel) and a conventional aircraft significantly reduces the potential harm to the participating and non-participating individuals or property in the event of an accident or incident.

### B. Approval is Warranted Based on the Operational Restrictions in CNN's Operating Documents

CNN's operating documents contain all the procedures and limitations necessary to safely and successfully perform the proposed operations. To expedite the FAA's safety assessment of CNN's proposed UAS operations, CNN has tailored its operating documents to comply with the conditions and limitations imposed on similarly situated petitioners seeking to use small UAS for aerial data collection. Below is a summary of operational limitations and conditions to which CNN will adhere, and which will ensure an equivalent or higher level of safety to operations conducted under current regulatory guidelines:

1. Operations authorized by this grant of exemption are limited to the AirRobot AR180, DJI Inspire 1, DJI Phantom 2 Vision, 3DR Solo and Watt 200 ETAP 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 require 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.

## V. REGULATIONS FROM WHICH EXEMPTION IS SOUGHT

The Federal Aviation Act expressly grants the FAA the authority to issue exemptions. This statutory authority, by its terms, includes exempting civil aircraft, as the term is defined under § 40101 of the Act, including UAS, from its safety regulations and minimum standards when the Administrator decides a requested exemption is in the public interest.[6]

[6] *See* 49 U.S.C. § 44701(f) (authorizing the grant of exemptions from requirements of regulations prescribed pursuant to Sections 44701(a) and (b) and Sections 44702 - 44716).

CNN seeks an exemption from several interrelated provisions of 14 C.F.R. Parts 45, 61 and 91 for purposes of conducting the requested operations using small UAS, including:

| FAR | Description |
|---|---|
| 91.9(c); 45.23(b) and 45.27(a) | Aircraft Marking and Identification Requirements |
| 91.405(a); 91.407(a)(1); 91.409(a)(1) and (2); 91.417(a) and (b) | Maintenance and Inspection Requirements |
| 61.113; 61.101(e)(4) and (5) | Private and Recreational Pilot Privileges and Limitations |
| 91.7(a) | Civil Aircraft Airworthiness |
| 91.9(b)(2); 91.203(a) and (b) | Carrying Aircraft Flight Manual, Certification and Registration in the Aircraft |
| 91.103 | Preflight Action |
| 91.109(a) | Flight Instruction |
| 91.119(c) | Minimum Safe Altitudes *Over Other than Congested Areas* |
| 91.121 | Altimeter Settings |
| 91.151(a) | Fuel Requirements for Flight in VFR Conditions |

Listed below are the specific sections of 14 C.F.R. for which exemption is sought, and the operating procedures and safeguards that Petitioner has established which will ensure a level of safety better than or equal to the rules from which exemption is sought.[7]

### A. 91.9(c), 45.23(b) and 45.27(a): Aircraft Marking and Identification Requirements

CNN seeks an exemption from the aircraft marking and identification requirements contained in 14 C.F.R. §§ 91.9(c), 45.23(b) and 45.27(a).

[7] *See* 14 C.F.R. § 11.81(e), which requires a petition for exemption to include:

> 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 you seek exemption.

- 14 C.F.R. § 91.9(c), Civil Aircraft Flight Manual, Marking and Placard requirements, provides that:

  No person may operate a U.S.-registered civil aircraft unless that aircraft is identified in accordance with Part 45 of this chapter.

- 14 C.F.R. § 45.23(b), Markings of the Aircraft, states:

  When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport, "experimental," or "provisional," as applicable.

- 14 C.F.R. § 45.27(a), Rotorcraft, states:

  Each operator of a rotorcraft must display on that rotorcraft horizontally on both surfaces of the cabin, fuselage, boom, or tail the marks required by § 45.23.

In prior grants of exemption under Section 333 of the Reform Act, the FAA determined that exemption from these requirements was warranted provided that the aircraft "have identification (N-Number) markings in accordance with 14 C.F.R Part 45, Subpart C if the markings are as large as practicable."[8] All UAS flown by CNN will bear N-number markings that are as large as practicable in accordance with 14 C.F.R. Part 45, Subpart C.[9]

**B. 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2); 91.417(a) and (b): Maintenance Inspections**

CNN seeks an exemption from the maintenance inspection requirements contained in 14 C.F.R. § 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2); 91.417(a) and (b). These regulations specify maintenance and inspection standards in reference to 14 C.F.R. Part 43.[10] An exemption from these regulations is needed because Part 43 and these sections only apply to aircraft with an airworthiness certificate, which the UAS to be operated under this grant of exemption will not have.

An equivalent level of safety will be achieved because maintenance and inspections will be performed in accordance with the operating documents and any required manufacturer Safety

[8] FAA Docket No. FAA-2014-0352.

[9] *See, e.g.*, FAA Docket No. FAA-2014-0352, at 14.

[10] *See, e.g.*, 14 C.F.R. § 91.405(a) (stating that each owner or operator of an aircraft "[s]hall have the aircraft inspected as prescribed in subpart E of this part and shall between required inspections …have discrepancies repaired as prescribed in part 43 of this chapter.").

or Service Bulletins. Further, as required by the operating documents, the PIC will conduct a pre-flight inspection of the UAS and all associated equipment to account for all discrepancies and/or inoperable components. Maintenance will be performed and verified to address any conditions potentially affecting safe operation of the UAS and no flights will occur unless, and until, all flight critical components of the UAS have been found to be airworthy and in a condition safe for operation. A functional test flight will be conducted following the replacement of any flight-critical components. As required by the operating documents, the PIC who conducts the functional test flight will make an entry in the UAS aircraft records of the flight.

The operating documents also include requirements to follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components. Moreover, the operating documents also include procedures to document and maintain a record of the UAS maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of Petitioner's UAS. As a whole, the maintenance and inspection procedures required by Petitioner's operating documents ensure that an equivalent or higher level of safety will be achieved.

### C. 61.113, 61.101(e)(4) and (5): Private and Recreational Pilot Privileges and Limitations

CNN seeks exemption from 14 CFR § 61.113, which restricts private pilot certificate holders from flying aircraft for compensation or hire, and would also require a second class medical certificate. The purpose of Part 61 is to ensure that the skill and competency of any PIC matches the airspace in which the PIC will be operating, as well as requiring certifications if the private pilot is carrying passengers or cargo for hire. In this case, while the UAS will be operated as part of a commercial operation, it carries neither passengers nor cargo.

In the Grant of Exemption No. 11062 to Astraeus Aerial[11], the FAA determined that the unique characteristics of UAS operation outside of controlled airspace did not warrant the additional cost and restrictions attendant with requiring the PIC to have a Commercial Pilot Certificate and Class II Medical Certificate. The fulfillment of the additional requirements for a private pilot to become qualified as a commercial pilot would not lead to any additional safety benefits when UAS operations are involved.

More recently, the FAA determined that holders of recreational and sport pilot certificates would also have adequate aeronautical knowledge to pilot a UAS. Accordingly, because these individuals would also be subject to security screening by the Department of Homeland Security (DHS), the FAA determined that holders of recreational and sport pilot certificates would be qualified to serve as the PIC for UAS operations.[12]

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[11] FAA Docket No. FAA-2014-0352.

[12] *See* Grant of Exemption No. 11213 to Aeryon Labs, Inc. (Docket No. FAA-2014-0642 at pgs. 8-9).

The restrictions Petitioner has placed on its UAS operations meet or exceed the restrictions similarly imposed on Astraeus Aerial and other operators in more recently granted exemptions under Section 333 of the FAA Reform Act. CNN will operate away from persons and property that is not the subject matter of the flight. CNN will also require all PICs to be thoroughly trained in the unique aspects of UAS flight. As set forth in the operating documents, pilots will have experience not only in UAS operations generally but have logged flight time in the specific make and model used for the operations before they are permitted to participate in commercial flights on behalf of CNN. The pilot qualification, training, and currency requirements in the operating documents ensure that CNN's pilots are competent and proficient in the UAS they are operating. The Petitioner's training and qualification requirements are consistent with those contained in prior FAA-issued grants of exemption, and will provide a higher level of competency and proficiency for its pilots and will ensure at least an equivalent level of safety.

### D. 91.7(a): Civil Aircraft Airworthiness

Inasmuch as there will be no airworthiness certificate issued for the UAS, CNN seeks an exemption from 14 C.F.R. § 91.7(a), which requires that a civil aircraft be in an airworthy condition to be operated. While the petitioner's UAS will not have an airworthiness certificate, the FAA has determined that for the purposes of this exemption the pilot may determine the aircraft is in an airworthy condition prior to flight. The operating documents contain procedures which allow the PIC to determine whether the aircraft is in a condition safe for flight, and an exemption from § 91.7(a) is therefore warranted.

### E. 91.9(b)(2): Civil Aircraft Flight Manual in the Aircraft and 91.203(a) and (b): Carrying Civil Aircraft Certification and Registration

Title 14 C.F.R. § 91.9(b)(2) and § 91.203(a) and (b) require the operator to carry airworthiness documents and other aircraft manuals onboard the aircraft.

Pursuant to 14 C.F.R. § 91.9(b)(2):

> (b) No person may operate a U.S.-registered civil aircraft –
> …
>
> 2) For which an Airplane or Rotorcraft Flight Manual is required by § 21.5 of this chapter, unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

Pursuant to 14 C.F.R. § 91.203(a) and (b):

> (a) Except as provided in § 91.715, no person may operate a civil aircraft unless it has within it the following:
>
> (1) An appropriate and current airworthiness certificate…

> (b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under § 91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

Given the small size and configuration of the UAS, it would be impossible to keep airworthiness documents and other aircraft manuals on board the UAS because there is simply no room and the UAS has no cabin or cockpit.

In an FAA Office of Chief Counsel's Opinion dated August 8, 2014, and prepared by Dean E. Griffith, Attorney, AGC-220, it was acknowledged that the intent of 14 C.F.R. 91.9(b) and 91.203(a) and (b) is met if the pilot of the unmanned aircraft has access to the UAS flight manual, registration certificate, and other required documents from the ground control station from which he or she is operating the aircraft.[13] As this FAA Office of Chief Counsel Opinion clarifies, the intent of the rule is to ensure the pilot has access to these key documents during flight. Therefore, an equivalent level of safety will be achieved by ensuring that the pilot has access to the documents at the ground control station from which he or she is piloting the UAS.[14]

**F. 91.103: Preflight Action**

Petitioner seeks an exemption from 14 C.F.R. § 91.103, which requires a PIC to become familiar with specific information before each flight, including information contained in the FAA-approved Flight Manual on board the aircraft. While the PIC will be familiar with all information necessary to safely conduct the flight, an exemption is requested to the extent that an FAA-approved Flight Manual is required.

Adherence to the requirements in the operating documents will ensure that the UAS is in an airworthy condition prior to flight. The PIC will perform a series of checklists designed to identify any defects or inoperable components, which cover pre-flight, take-off, landing and post-flight procedures. The PIC will also be required to review weather, flight requirements, battery charge, landing and takeoff distance, UA performance data, and contingency landing

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[13] Memorandum from Mark Bury, FAA Assistant Chief Counsel for International Law, Legislation and Regulation, to John Duncan, FAA Flight Standards Service (Aug. 8, 2014); *see also* Docket No. FAA-2014-0352 at 16-18.

[14] *See also* Exemption No. 11213 to Aeryon Labs, Inc. at pg. 11:

> The petitioner requested relief from 14 CFR § 91.9(b)(2): *Civil aircraft flight manual, marking, and placard requirements* and § 91.203(a) and (b): *Civil aircraft: Certifications required.* The FAA has previously determined that relief from these sections is not necessary. *See* Exemption No. 11062. Relevant materials may be kept in a location accessible to the PIC in compliance with the regulations.

areas—before initiation of flight. Petitioner's operating documents will be kept at the ground control station and will be accessible to the PIC at all times while operating the UAS.

### G. 91.109(a): Flight Instruction

Petitioner seeks an exemption from 14 C.F.R. § 91.109(a), which provides in pertinent part that "[n]o person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls." UAS and remotely piloted aircraft, by their design, do not have functional dual controls. Instead, flight control is accomplished through the use of a device that communicates with the aircraft via radio communications. Accordingly, an exemption will be required for the flight instruction requirements of 14 C.F.R. § 91.109(a).

Given the size and speed of the UAS that Petitioner intends to use, an equivalent level of safe training can still be achieved without dual controls because no pilot or passengers are aboard the UAS, and as required by the operating documents, all persons will be a safe distance away in the event that the UAS experiences any difficulties during flight instruction. Moreover, all flight training will be conducted in controlled and sterile environment. As a whole, the procedures provided for in the operating documents ensure that UAS flight instruction can be performed safely.

### H. 91.119(c): Minimum Safe Altitudes Over Other Than Congested Areas

CNN requests an exemption from the minimum safe altitude requirements of 14 C.F.R. § 91.119(c).[15] Section 91.119 prescribes the minimum safe altitudes under which aircraft may not operate, including 500 feet above the surface and away from any person, vessel, vehicle, or structure in non-congested areas. *See* 14 C.F.R. § 91.119(c).

An exemption is required because the proposed UAS operations will normally need to occur below 400 feet AGL. Additionally, due to the nature of the proposed operations, the PIC and/or Observers may need to be less than 500 feet away from the UAS. Compared to flight operations with rotorcraft weighing far more than the maximum weights proposed herein, and given the lack of flammable fuel with the UAS, any risk associated with these operations is far less than those that presently exist with conventional aircraft.

An equivalent level of safety will be achieved given the size, weight, and speed of the UAS, as well the controlled location where the operations will occur. In order to avoid any risk to manned aircraft, flight operations will be restricted to below 400 feet AGL. As set forth in the operating documents, the UAS will be operated in a controlled environment, and all flights will

[15] Relief from § 91.119(a) will not be necessary because Petitioner will be able to perform an emergency landing without undue hazard to persons or property on the ground in the event of a failure. Petitioner's proposed UAS operations will not occur over congested areas, and therefore an exemption from § 91.119(b) will not be necessary. *See e.g.*, Grant of Exemption No. 11157 to Slugwear, Inc., dba Likeonatree Aerial at pg. 15 (Docket No. FAA-2014-0534 ).

occur at a lateral distance of at least 500 feet from nonparticipating persons, unless that person is in a position where he or she is shielded from the UAS and any possible debris resulting from UAS failure. Procedures will be in place to ensure flight operations can be safely terminated if a nonparticipating person within 500 feet of the UAS leaves a shielded position. Further, UAS operations will occur at least 500 feet away from vehicles or structures unless the property owner/controller has granted permission and the PIC has made a safety assessment of the risk of operating closer to those objects, and operations near the PIC or Observer will not present an undue hazard per § 91.119(a). Adherence to these restrictions in CNN's operating documents will ensure the proposed operations can be conducted without compromising safety to persons or property on the ground.

### I. 91.121: Altimeter Settings

To the extent necessary for CNN to conduct the proposed operations, Petitioner requests an exemption from 14 C.F.R. § 91.121, which requires a person operating an aircraft to maintain cruising altitude or flight level by reference to an altimeter that is set to the elevation of the departure airport or barometric pressure.

The FAA has stated that an equivalent level of safety to the requirements of 14 C.F.R. § 91.121 can be achieved in circumstances where: (1) the UAS will be operated 400 feet AGL or below, (2) within VLOS, (3) where GPS based altitude information is relayed in real time to the operator at a ground-based on-screen display and, (4) where prior to each flight, a zero altitude initiation point is established for the PIC to confirm accuracy of the onboard GPS.[16]

The UAS that Petitioner intends to use for performing the proposed operations meet all these operational characteristics. Moreover, the operating documents require the PIC to calibrate the aircraft's GPS compass prior to each flight operation. As the FAA has determined in circumstances similar to this Petition for Exemption, Petitioner's UAS and the safety mitigation procedures contained in the operating documents, ensure that an equivalent level of safety will be achieved, and a grant of exemption to the requirements of § 191.121 is therefore appropriate.[17]

### J. 91.151(a): Fuel Requirements for Flight in VFR Conditions

CNN requests an exemption from 14 C.F.R. § 91.151(a)'s fuel requirements for flight in VFR conditions. Section 91.151 states:

> (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 –

[16] *See* Grant of Exemption No. 11062 to Astraeus Aerial (FAA-2014-0352 at 21).

[17] It should be noted that the 3DR Solo employs a barometric altimeter, so no exemption is needed from this section for that vehicle.

(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.

Here, the technological limitations on UAS battery power means that no meaningful flight operations can be conducted while still maintaining a 30-minute battery reserve. An exemption from the fuel requirements of 14 C.F.R. § 91.151(a) is therefore required.

The FAA has previously granted relief from the fuel requirements of § 91.151(a) for flight in daytime VFR conditions in circumstances similar to those presented in this Petition for Exemption.[18] In Exemption No. 11213 to Aeryon Labs, Inc.[19], the FAA determined that a requirement prohibiting the PIC from beginning a UAS flight unless (considering wind and forecast weather conditions) there was enough available power for UAS to operate for the intended operational time and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater, would ensure an equivalent level of safety to the fuel requirements of § 91.151(a).[20] Petitioner's operating documents impose this same requirement and an exemption from § 91.151(a)'s fuel requirements for flight in VFR conditions is therefore appropriate.

## VI. DRUG AND ALCOHOL PROGRAM

CNN will have policies in place to ensure that no person may participate in UAS flight operations if they are under the influence of alcohol or any drug.

## VII. PUBLIC INTEREST

The public interest will be served by granting CNN's Petition for Exemption. Congress has established a national policy that favors early integration of UAS into the NAS in controlled, safe working environments such as those proposed in this Petition. Granting this Petition for Exemption helps fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act—the FAA Administrator's assessment of whether certain UAS may operate safely in the NAS before completion of the statutorily required rulemaking.

More importantly however, and as recognized by the FAA in prior grants of exemption allowing commercial operation of UAS for purposes similar to those described herein, granting the requested exemptions will significantly improve safety and reduce risk by alleviating the public's exposure to danger and emissions associated with using manned aircraft to perform equivalent aerial data collection. Petitioner's UAS are battery powered and create no emissions. Moreover, in the unlikely event that one of Petitioner's UAS crash, there is no fuel to ignite and

[18] *See e.g.*, Exemption Nos. 8811, 10808, and 10673.

[19] Docket No. FAA-2014-0642.

[20] Exemption No. 11213 at pg. 12.

explode. Any accident involving Petitioner's lightweight UAS will present significantly less danger to the pilot and other individuals on the ground than one involving a full size aircraft.

Beyond increased levels of safety, the public stands to benefit enormously from the news media's use of UAS. UAS offer a unique, safe, low cost method of obtaining an aerial perspective on an area or events. From the printing press, to the internet, and everything in between, new technologies are often used to advance and protect the public's First Amendment rights by enhancing access to important information. Like the technologies that came before it, UAS offer an alternative means to gather and disseminate news and other important information in situations where it would be too unsafe or cost prohibitive to fly a conventional helicopter. The public as a whole will benefit from the increased access to information that UAS can bring to newsrooms across the country.

## VIII. PRIVACY

Maintaining an ethical balance between citizens' right to a private life and the right to freedom of expression is an essential component of CNN's operating procedures and commitment to responsible journalism. All UAS operations under the exemption will be conducted in accordance with applicable federal, state, or local laws regarding privacy.

## IX. FEDERAL REGISTER SUMMARY

The following summary is provided pursuant to 14 C.F.R. Part 11:

Petitioner seeks an exemption from the following rules in Title 14 of the Code of Federal Regulations:

> 45.23(b); 45.27(a); 61.113; 61.101(e)(4) and (5); 91.7(a); 91.9(b)(2); 91.9(c); 91.103; 91.109(a); 91.119(b); 91.121; 91.151(a); 91.203 (a) & (b); 91.405(a); 91.407(a)(1); 91.409(a)(1) & (2); 91.417 (a) & (b).

The exemption will enhance safety by reducing risk to the general public and property owners from the substantial hazards associated with using conventional fixed-wing aircraft or, rotorcraft for aerial data collection in support of news gathering operations.

## X. CONCLUSION

CNN's Petition for Exemption satisfies the criteria articulated in Section 333 of the Reform Act of 2012, including weight, speed, operating capabilities, proximity to airports and populated areas, operation within VLOS and national security. The proposed operations in this Petition for Exemption are similar to those in previously issued grants of exemptions, and they would benefit the public as a whole by improving safety. In consideration of the foregoing, this Petition for Exemption provides the FAA with all the necessary justification for issuance of a Grant of Exemption allowing CNN to use small UAS for aerial data collection in support of its newsgathering and reporting activities.

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

Very truly yours,

Lisa Ellman

Lisa M. Ellman
Mark E. McKinnon
Matthew J. Clark
*Counsel for Cable News Network, Inc.*

Attachments

(The following attached items will be submitted under separate cover as they contain proprietary and commercial information exempt from disclosure under the Freedom of Information Act, 5 U.S.C. § 522 *et seq.*, and should be held in a separate file pursuant to 14 C.F.R. § 11.35(b)).

**Attachments:**

- CNN UAS Operations Manual
- 3DR Solo Description and Operations Manual
- Drone Aviation Corporation Watt 200 ETAP Operating and Maintenance Manual