



U.S. Department
of Transportation

**Federal Aviation
Administration**

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

August 11, 2015

Exemption No. 11304A
Regulatory Docket No. FAA-2014-1014

Mr. Mark E. McKinnon
Counsel for Auburn University Aviation Center
McKenna Long and Aldridge, LLP
1676 International Drive Penthouse
McLean, VA 22102

Dear Mr. McKinnon:

This letter is to inform you that we have granted your petition for an amendment. It explains the basis for our decision, describes its effect, and lists any changes to the original conditions and limitations.

By letter dated June 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Auburn University Aviation Center (hereinafter petitioner or operator) for an amendment to your current exemption. That exemption from §§ 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) of Title 14, Code of Federal Regulations (14 CFR) allows the petitioner to operate a UAS to perform aerial data collection. You requested an amendment to add the PrecisionHawk Lancaster Hawkeye Mk-III, DJI Phantom 2, DJI Inspire 1, 3D Robotics Iris, 3D Robotics Iris+, Trimble UX5, Auburn EasyStar, and Auburn War Eagle Fixed Wing.

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner. The unmanned aircraft authorized in the original grant are comparable in type, size, weight, speed and operating capabilities to those in this petition.

Airworthiness Certification

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

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 11304 remains valid and is in the public interest. Therefore, under the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, the operator is granted an amendment to add new aircraft to its UAS operations.

The operator shall add this amendment to its original exemption.

Conditions and Limitations

All conditions and limitations within Grant of Exemption No. 11304 remain in effect except as follows. Condition No. 1 has been updated to reflect the additional aircraft.

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 PrecisionHawk Lancaster Hawkeye Mk-III, DJI Phantom 2, DJI Phantom 2 Vision +, DJI Inspire 1, 3D Robotics Iris, 3D Robotics Iris+, Trimble UX5, Auburn EasyStar, and Auburn War Eagle Fixed Wing 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.

This exemption terminates on April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

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June 2, 2015

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

Re: Petition to Amend Exemption No. 11304 Issued to Auburn University
Aviation Center (Docket No. FAA-2014-1014)

To Whom it May Concern:

Auburn University Aviation Center (Auburn) was issued Exemption No. 11293 on April 8, 2015 (hereinafter "the Exemption"), allowing operation of the DJI Phantom 2 Vision+ for aerial data collection. Auburn hereby requests an amendment to the Exemption to add additional sUAS vehicles that fully comply with the conditions of the Exemption.

Auburn seeks to operate the following additional sUAS vehicles under the same conditions and limitations contained in the Exemption: PrecisionHawk Lancaster Hawkeye Mk-III, DJI Phantom 2, DJI Inspire 1, 3D Robotics Iris, 3D Robotics Iris+, Trimble UX5, Auburn EasyStar sUAS, and Auburn War Eagle Fixed Wing sUAS. In addition to this Petition to Amend Exemption No. 11304, Auburn will also submit the following additional supporting documents:

- Auburn Lancaster Hawkeye Mk-III sUAS Aircraft Flight Manual
- Auburn DJI Phantom 2 and Vision+ sUAS Aircraft Flight Manual
- Auburn Trimble UX5 sUAS Aircraft Flight Manual
- Auburn DJI Inspire 1 sUAS Aircraft Flight Manual
- Auburn 3D Robotics IRIS sUAS Aircraft Flight Manual
- Auburn War Eagle Fixed Wing sUAS Aircraft Flight Manual
- Auburn EasyStar sUAS Aircraft Flight Manual
- Auburn sUAS Operations Manual v1.1

Auburn submits these manuals 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 Auburn 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.*

Auburn believes that an amendment adding these sUAS vehicles to the Exemption is in the public's interest as it would reduce hazards and emissions associated with alternate use of manned aircraft to conduct similar aerial data collection. Like the DJI Phantom 2 Vision+ authorized for use under the Exemption, the additional vehicles are light weight and do not carry any flammable fuel, further reducing the risk from any potential accident. Moreover, the FAA is familiar with and has already determined that six of the eight additional vehicles chosen by Auburn meet the requirements of Section 333 of the Reform Act due to their weight, speed and operational capabilities: PrecisionHawk Lancaster Hawkeye Mk-III, DJI Phantom 2, DJI Inspire 1, 3D Robotics Iris, 3D Robotics Iris+, and Trimble UX5. *See e.g.,*

- **PrecisionHawk Hawkeye Lancaster Mk-III:** Exemption No. 11273 to AIG PC Global Services, Inc.; Exemption No. 11573 to Ag Tech Enterprises, Inc.; Exemption No. 11551 to AgWorx Inc; Exemption No. 11345 to PrecisionHawk, Inc.
- **DJI Phantom 2:** Exemption No. 11494 to The Travelers Companies, Inc.; Exemption No. 11445 to Unmanned Aerial Solutions; Exemption No. 11442 to Hazon Solutions
- **DJI Inspire 1:** Exemption No. 11657 to Fresh Cut Above, Inc.; Exemption No. 11658 to Navigator CS, LLC; Exemption No. 11659 to Fovea Aero Systems LLC
- **3D Robotics Iris:** Exemption No. 11521 to SkyWard IO, Inc.; Exemption No. 11533 to AviTronics Integrated Solutions, LLC
- **3D Robotics Iris+:** Exemption No. 11549 to Thomas' Wildlife Solutions, Inc.; Exemption No. 11490 to The Travelers Companies, Inc.; Exemption No. 11273 to AIG PC Global Services, Inc.
- **Trimble UX5:** Exemption No. 11432 to CompassData, Inc.; Exemption No. 11329 to Falkirk Mining Company; Exemption No. 11110 to Trimble Navigation, Ltd.

Auburn's proprietary UAS vehicles—the War Eagle Fixed Wing sUAS and EasyStar sUAS, also meet the requirements of Section 333 of the Reform Act due to their weight, speed and operational capabilities. Auburn's War Eagle Fixed Wing sUAS and EasyStar sUAS both weigh less than 55 pounds including payload. They also have the capability to operate safely after experiencing certain in-flight contingencies or failures and use an auto-pilot system to maintain sUAS stability

and control. The War Eagle sUAS and EasyStar sUAS are also able to respond to a loss of GPS or a lost-link event with a pre-coordinated, predictable, automated flight maneuver. The radio frequencies used for operations and control of Auburn's War Eagle and EasyStar sUAS also comply with the Federal Communications Commission (FCC) and other appropriate government oversight agency requirements. Finally, both sUAS vehicles operate at a speed of 87 knots or less.

As this amendment only seeks to add sUAS vehicles that the FAA has either already approved for performing aerial data collection, or vehicles which exhibit the same exact characteristics and operating capabilities which would warrant approval under Section 333 of the Reform Act, Auburn respectfully submits that this amendment request is not precedent setting and therefore qualifies for expedited approval via the FAA's summary grant process. For these same reasons, Auburn also believes that good cause exists for not publishing a summary of this amendment request in the Federal Register.

If you have any questions, or need any additional information to process the requested amendment to the Exemption, please do not hesitate to contact the undersigned, or John McGraw at:

John McGraw
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Phone: 540-219-1638
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Very truly yours,



Matthew J. Clark
Mark E. McKinnon

Attachments

(The following attached items 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:

- Auburn Lancaster Hawkeye Mk-III sUAS Aircraft Flight Manual
- Auburn DJI Phantom 2 and Vision+ sUAS Aircraft Flight Manual
- Auburn Trimble UX5 sUAS Aircraft Flight Manual
- Auburn DJI Inspire 1 sUAS Aircraft Flight Manual
- Auburn 3D Robotics IRIS sUAS Aircraft Flight Manual
- Auburn War Eagle Fixed Wing sUAS Aircraft Flight Manual
- Auburn EasyStar sUAS Aircraft Flight Manual
- Auburn sUAS Operations Manual v1.1