



UPS Flight Forward Inc.
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June 10, 2021

U.S. Department of Transportation
Docket Management Systems, Docket Operations
West Building Ground Floor, Room W12-140,
1200 New Jersey Ave., SE
Washington, DC 20590

Subject: Amendment to Exemption 18338C to continue progress towards integration off UAS into the NAS that normalize safe, scalable, economically viable, and environmentally advantageous UAS operations.

To Whom It May Concern:

Summary

The Federal Aviation Administration issued Exemption 18338C to UPS Flight Forward on 4 April, 2021. See Docket No. FAA-2019-0652 (exemption from § 91.7(a) and 135.25(a) of Title 14, Code of Federal Regulations (14 CFR)). In Addition, Federal Aviation Administration issued Exemption 18339B to UPS Flight Forward on 27 April, 2021. See Docket No. FAA-2019-0628 for list of exemptions. Pursuant to 14 C.F.R. Part 11 and 49 U.S.C. § 44807, UPS Flight Forward Inc. ("UPSFF"), hereby requests Amendments of Exemption 18338C necessary to continue to expand air carrier operations under 14 C.F.R. Part 135 employing the Matternet Inc. ("Matternet") M2 unmanned aircraft systems ("UAS"). In an effort to expand operations, UPSFF intends to transport items other than "medical supplies" but would fall under the overarching label of "package delivery." The proposed amendment is supported by 21 continuous months of safe air carrier operations in the United States providing continued promotion and innovation of economic development of UAS.

Amendments requested: UPSFF is seeking amendment to the conditions and limitations in Exemption 18338C.

Amendment requested to the following Conditions & Limitations:

18338C: 5, 10, 21, 28

I. Introduction

Exemption 18338C was issued to permit UPSFF to conduct air carrier operations with the Matternet M2 aircraft while Matternet is engaged in the process of obtaining a type certificate for the M2. Matternet has demonstrated and completed the required flight hours in support of the durability and reliability criteria as allowed under §21.17(b) to achieve type certification. UPSFF requests relief from Conditions and Limitations within 18338C to continue to expand operations safely while becoming more economically scalable and viable. Therefore, UPSFF requests that FAA grant this Petition to Amend Exemption 18338C.

II. Amendments Requested

UPSFF seeks to amend exemption 18338C as necessary to allow for the following operational improvements and sustainability. These practices are supported by lessons learned through 21 months of safe Air Carrier operations with over 5,000 flights in the United States and through testing & demonstrations in support of the Type Certification.

1. 18338C (C&L #5):

Request: UPSFF is requesting modification of Exemption 18338C (C&L #5) requirements for the M2 to have anti-collision lights on for all flights as well as position lights between sunset and sunrise. UPSFF is requesting language be adjusted to align with 107.29 (b) "Operations between periods of civil twilight the aircraft must have lighted anti-collision lighting visible for at least 3 statute miles that has a flash rate sufficient to avoid a collision." In addition, UPSFF is requesting relief from 91.205 (c)(2)(3) requiring approved position lights in exemption 18339 submission. Anti-collision lights are sufficient to provide the same or greater level of safety for flights under 400 ft. Alignment with recent regulations 107.29 (b) provide consistency and provide the same level of safety.

2. 18338C (C&L #10):

Request: UPSFF is requesting modification of Exemption 18338C (C&L #10) requirements for the M2 "Prior to conducting operations, the pilot interface (as described in the UFM) and geofence system encompassing the predefined vertical or horizontal route envelope for each aircraft must be verified as currently available and properly operative," to read "Prior to conducting operations, the pilot interface (as described in the UFM) and geofence system encompassing the predefined vertical or horizontal route envelope for each aircraft must be operative." This language accurately captures the function of the M2 and complies with the FAA intent of operating with all systems operative. The geofence boundaries are determined and programmed into the system as part of the route planning process, which requires the geofence to be included before the route is created into the Matternet system. The existing process and system requirements provide an equivalent level of safety.

3. 18338C (C&L#21)

Request: UPSFF is requesting modification of Exemption 18338C (C&L #21) "Operational Route Plan," ORP process. Our change request is as follows: "Within the approved Operations Area, routes are developed and approved by UPSFF through the UPSFF Route Approval process." Continued growth and efficiency of UPSFF requires a change to the current C&L that requires each route to be approved by the FAA. UPSFF proposes utilization of the "UPSFF Route Approval Process" to assess, analyze and mitigate future routes and modification of existing routes within an approved operations area. The assessment of each route will be analyzed by utilization of a route software solution that overlays updated data sets to clearly identify hazards. UPSFF will apply our accepted Safety Management System ("SMS") program to complete and document the process and formulate mitigations to an acceptable risk. Supporting manuals and documentation are confidential and proprietary and will be submitted under separate cover.

4. 18338C (C&L #28):

Request: UPSFF is requesting modification of Exemption 18338C (C&L #28) limiting the M2 to operate at least 250 feet above any non-participating human beings. UPSFF is requesting modification of this language to state "For operations over non-participating human beings, the small UA parachute system must be operational and the small UAS must be operated at or above the minimum deployable altitude of the parachute, as defined by the OEM." This language allows flexibility for the operator as the OEM continues to develop systems and gain Administrative approval, while maintaining an equivalent level of safety

III. Grant of the Amendments are in the Public Interest

UAS delivery depends on safe, responsible, and scalable operations. UPSFF has demonstrated safe operations through 21 months of continuous Part 135 Air Carrier service, and extensive testing. UPSFF continues to demonstrate our commitment to responsible flying, including extensive community engagement. UPSFF values our partnership in the PSP and BEYOND programs sharing significant practical experience and data regarding small UAS air carrier operations. UPSFF is committed to assisting the FAA in understanding the risks and appropriate risk mitigation measures, which will further the FAA's policy decisions that could result in rulemaking decisions.¹ UPSFF is committed to the testing and advancement of new technologies, alongside the FAA to advance the UAS industry.

Economic benefits include the creation of jobs in support of UPSFF operations and well as supporting local businesses by providing logistical services from established enterprises to consumers. Our same-day delivery reduces exposure for high risk demographics and reduces transit time. UAS zero emissions operations are environmentally friendly, reducing the emissions profile of our air and ground operation. In addition, these aircraft reduce the noise of traditional aircraft and ground courier operations. Drone delivery has the potential to reduce accidents and miles driven as well as servicing various customers, including rural and hard to reach areas.

Therefore, granting this amendment is in the public interest as it will permit UPSFF to continue to support the FAA's goals of fully integrating UAS into the National Airspace System, further developing certificated air carrier services that normalize safe, scalable, economically viable, and environmentally advantageous UAS operations.

IV. Grant of the Amendment Achieves an Equivalent Level Of Safety

Operations are subject to UPSFF Air Carrier approved and accepted manuals and the OpSpecs as well as any Conditions and Limitations in current Exemptions 18338 and 18339. UPSFF has submitted an SMS program voluntarily and will be one of the first UAS Part 135 Air Carriers to seek a validated and accepted program. The reliability of the Matternet system and UPS Flight Forward operational experience achieves a level of safety equivalent to that provided under the foregoing regulations.

Requested changes to the ORP process will utilize UPSFF SMS processes and the updated route approval process would exist in the FAA accepted UPSFF GOM manual. The new ORP process will be documented and achieves an equivalent level of safety compared with the existing ORP process.

V. Conclusion

Further, the proposed amendments will advance the objectives of the FAA's BEYOND program of enabling operations that are "repeatable, scalable and economically viable with a specific emphasis on... small package delivery." In addition, they will help to realize major objectives of the former Integration Pilot Program that remain in the public interest, including to "open the skies for the delivery of... commercial packages" and to "help in the development of a future national aviation regulatory framework that can fuel American leadership in unmanned aviation." They will enable UPSFF to expand operations, and will help to advance the Federal Aviation Administration's (FAA) goal of enabling operations that normalize safe, scalable, economically viable, and environmentally advantageous UAS operations.

¹ Grant of Exemption 18338C; see also FAA Reauthorization Act of 2018, Public Law 115-254, § 348 (requiring FAA to "update existing regulations to authorize the carriage of property by operators of small unmanned aircraft systems for compensation or hire within the United States.").

We respectfully request evaluation of these requested amendments.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Bergesen". The signature is fluid and cursive, with the first letter "E" being particularly large and stylized.

Eric Johan Bergesen
Director of Operations
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