

**BEFORE THE
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C.**

IN THE MATTER OF

Petition of Zipline International, Inc. for Exemption

Docket No. FAA-2020-0499

COMMENTS OF THE SMALL UAV COALITION

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The Small UAV Coalition¹ is pleased to provide comments in support of the petition by Zipline International, Inc. (“Zipline”) for an exemption pursuant to 49 U.S.C. §44807 and from multiple provisions of Parts 61, 91, and 135 to operate the Zipline unmanned aircraft system (“Zip UAS”) to conduct delivery of medical supplies, for compensation or hire under a Part 135 air carrier operator certificate. While Zipline is a participant in the North Carolina Integration Pilot Program (“IPP”) in partnership with Novant Health, Inc., it is also renowned for its trailblazing delivery of blood and other medical supplies in Rwanda and Ghana, where it has conducted over 37,000 commercial flights over 2.1 million miles. As part of the IPP, Zipline is supplying its pilots and Zips to Novant Health to transport medical supplies between Novant Health facilities in the Charlotte metropolitan area. Zipline intends to expand the scope of its Part 135 operations upon receipt of necessary FAA regulatory approvals and waivers.

Members of the Small UAV Coalition support advancing regulatory and policy changes to permit UAS operations beyond visual line of sight (“BVLOS”), with varying degrees of autonomy, for commercial and other civil purposes. In particular, the Coalition has long advocated for a UAS air carrier rule to provide a performance-based certification process tailored to the different risk profile of small drones. Currently, the FAA does not permit a waiver for BVLOS commercial package delivery under Part 107, and therefore a Part 135 operator certificate is necessary.

However, there is clear congressional intent that the FAA should begin this initiative as soon as possible. Section 348 of the FAA Reauthorization Act of 2018 directs the FAA to within one year update its rules to authorize small UAS operators to carry property for compensation or hire. This rulemaking shall, *inter alia*,

- (1) Use performance-based requirements.

¹ Members of the Small UAV Coalition may be found on the Coalition’s website: www.smalluavcoalition.org

- (2) Consider varying levels of risk to other aircraft and to persons and property on the ground . . . and tailor performance-based requirements to appropriately mitigate risk.
- (3) Consider the unique characteristics of highly automated, small unmanned aircraft systems.

49 U.S.C. §44808(b).

The Coalition believes that granting Zipline's petition will assist the FAA in developing a UAS air carrier rule consistent with congressional intent that will obviate such petitions in the future.

The Zip UAS is a fixed-wing aircraft that flies autonomously along a pre-planned route to pre-approved delivery sites, such as hospitals and clinics. The package is delivered via a small parachute. The Zip weighs under 50 lbs. with maximum payload of 3.9 lbs. Its fuselage is covered with deformable crash foam, which frangibility provides mitigation in the event of an impact. Zipline will initially operate extended visual line of sight ("EVLOS") operations, in which "the controller (pilot in command), who is responsible for monitoring airspace, Zip telemetry, and weather during a given flight" will be supplemented by visual observers positioned along the route every 2-3 miles. Zipline is developing an onboard sense-and-avoid system, which, with other safety mitigations, will allow for BVLOS operations. The Coalition supports granting EVLOS authority with the opportunity to authorize BLVOS with adequate mitigations.

Among the safety features of the Zip is its Paraland parachute landing safety system, which manually or automatically deploys a parachute and lands the Zip if it enters a critical state, such as a loss of power or software failure.

Zipline is currently seeking type and airworthiness certification for the Zip. The manuals that support this certification are proprietary, and the Coalition therefore defers to the FAA with respect to the airworthiness of the Zip. Congress required the FAA in Section 345 of the FAA Reauthorization Act to establish a process for "accepting risk-based consensus safety standards related to the design, production and modification of small unmanned aircraft systems." Subsection 345(e) provides that such a process may obviate type and airworthiness certification, although the FAA has indicated that it will use its existing special conditions authority to allow for type and airworthiness certification for small UAS. The Coalition is mindful that several companies in addition to Zipline are going through the existing type, production, and airworthiness certification processes, and believes that the experience from these certification processes should inform the development of consensus safety standards.

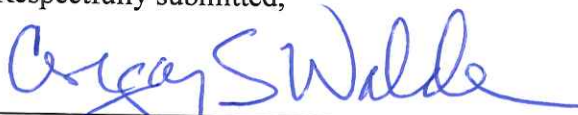
Zipline seeks exemptions from several operating rules in Parts 91 and 135. Given that Zipline will operate its UAS largely in Class G airspace about 320 feet AGL during cruise and descending to about 70 feet AGL for delivery, and for the reasons stated in its petition, the Coalition believes that relief from these rules is also warranted.

With respect to pilot certification, Zipline's remote pilots will hold a Part 107 remote pilot certificate with a second class medical certificate, and will have successfully completed Zipline's training program tailored to the Zip. The Coalition believes that this training will suffice and that a Part 61 certificate would not add any additional relevant skills or training.

UAS package delivery promises untold societal benefits, including reducing stress on transportation infrastructure and transporting goods with lower environmental impact than traditional surface or airborne transportation methods. Transporting medical supplies as Zipline has done and proposes to do commercially in the United States provides substantial health and safety benefits through contactless delivery in a fraction of time it would take to deliver the supplies via ground vehicle. These benefits are seen in how Zipline has assisted Novant Health in responding to the COVID-19 pandemic. The Coalition considers granting Zipline's petition an additional step towards developing a mature certification and a regulatory framework for integrating all types of UAS operations in the navigable airspace, and delivering on the promise of environmentally-friendly efficient and safe delivery of supplies that will save lives.

For the above reasons, including Zipline's safety record in Africa and in the United States, the Coalition supports granting Zipline's petition in full.

Respectfully submitted,



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