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

IN THE MATTER OF

Airworthiness Criteria: Special Class Airworthiness Criteria for the MissionGO MGV 100 Unmanned Aircraft

Docket No. FAA-2022-0353

COMMENTS OF THE SMALL UAV COALITION

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October 17, 2022

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The Small UAV Coalition[1] (the "Coalition") is pleased to provide its comments in support the FAA's proposed airworthiness criteria for the MissionGO MGV 100 battery-powered electric vertical takeoff and landing ("eVTOL") drone weighing around 54 lbs. 87 Fed. Reg. 56743 (Sept. 15, 2022). The drone flights will be conducted by a single pilot operating a single drone for package delivery. The Coalition supports the FAA's policy adopted in 2020 that drones should be type-certificated as special class aircraft because airworthiness standards for drones have not been established in a rule. That remains the fact, as stated in the preamble to these proposed criteria.

While the Coalition supports the FAA's decision to use the special class designation, it urges the FAA to move forward with its rulemaking(s) to implement the BVLOS Aviation Rulemaking Committee report and recommendations, as well as by adopting standards for detect-and-avoid technology, both on-board and ground-based.

In D&R.310, the FAA proposes that the capability to detect and avoid other aircraft and obstacles, if requested for approval, must be demonstrated by test. DAA technology is the key to unlocking BVLOS operations at scale, and FAA – working with industry standards organizations – should devote sufficient attention and resources to adopting the means by which this technology can be approved for service.

These proposed criteria are very similar to the criteria the FAA established last year for ten drone models, ranging from 5 pounds to over 55 pounds with various designs. The MissionGO MGV 100 fits within this range of drone models. Regardless of any differences among models, under a

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[1] Members of the Small UAV Coalition are listed at www.smalluavcoalition.org.

performance-based approach these drone models have safety-critical attributes that will enable them to meet these airworthiness criteria.

The Coalition strongly supports the proposed criteria's "focus on mitigating hazards by establishing safety outcomes that must be achieved, rather than by establishing prescriptive requirements that must be met." 87 Fed. Reg. at 56744.

Regarding proposed D&R.300 (Durability and Reliability), the Coalition supports the change from the requirement that the drone –

> must be designed to be durable and reliable commensurate to the maximum population density specified in the operating limitations.

to

> must be designed to be durable and reliable when operated under the limitations prescribed for its operating environment, as documented in its CONOPS and included as operating limitations on the type certificate data sheet and in the UA Flight Manual.

Regarding the proposed D&R.300 requirement that no failures occur "that result in loss of flight, loss of control, loss of containment, or emergency landing outside the operator's recovery area," the Coalition recommends that a single failure during testing should not automatically restart counting the number of flight test operations set for a particular population density. Rather, if the applicant can identify the failure through root cause and fault tree analysis and provide a validated mitigation to prevent its recurrence, the number of consecutive failure-free operations and overall flight test hours allocation should be adjusted to be proportionate to the particular risk of that failure.

The Coalition also supports revising the text from –

> emergency landing outside an operator's landing area.

to

> emergency landing outside the operator's recovery area.

As the Coalition stated in its comments on the proposed airworthiness criteria for the first ten drone models, "some UAS design elements could include an onboard health system that initiates a landing to lessen the potential of a loss of control event. In those cases, if the landings could be demonstrated to occur in safer locations that should not" count as a failure. The Coalition seeks confirmation that the text "operator's recovery area" includes that sort of landing.

In sum, the Coalition supports these proposed airworthiness criteria as another step forward with type and airworthiness certification of drones as a special class, using performance standards instead of prescriptive limits except where necessary.

Respectfully submitted,

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