

**BEFORE THE
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.**

IN THE MATTER OF

**Notice of Proposed Rulemaking: Amendment to the Definition of
Unmanned Aircraft Accident**

Docket No. NTSB-2021-0004

COMMENTS OF THE SMALL UAV COALITION

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The Small UAV Coalition (“Coalition”)¹ is pleased to provide its comments on the proposal of the National Transportation Safety Board (“NTSB” or “Board”) to revise the definition of “unmanned aircraft accident” to remove the 300-pound weight threshold for occurrences in which the aircraft receives substantial damage and replace that threshold with aircraft that ‘holds an airworthiness certificate or approval.’ 86 Fed. Reg. 27550 (May 21, 2021). The Coalition supports removal of the weight threshold and supports the NTSB’s position that the definition of “accident” where no death or serious injury to a person occurs should be limited to operations in higher risk environments. However, the Coalition recommends the Board align its definition with the FAA definition in part 107, which relates to damage to property other than to the unmanned aircraft system (UAS), rather than damage to the aircraft in the current and proposed NTSB definition. The Coalition also seeks clarification on what the NTSB intends to cover by the use of “approval.”

Operations resulting in a death or serious injury to a person

As an initial matter, the Coalition supports the NTSB’s decision to maintain the current definition of “unmanned aircraft accident” (paragraph 1) to include any occurrence in which a person suffers death or serious injury. In such instances, neither the weight of the drone, nor the operational environment, nor the lack of certification or exemption should be relevant. Operations under part 107 will thus be covered where an accident involves death or serious injury.

The preamble states that “[t]his proposed definition will not affect hobbyist/modeler operations. The NTSB does not intend to investigate such accidents.” The Coalition agrees with this statement with respect to occurrences resulting in substantial damage to property but no death or serious injury to a person. The Coalition is confident the NTSB will investigate accidents

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

involving a hobbyist/modeler operation in which there is a death or serious injury to a person. Many hobbyist/modeler operations under part 101 are conducted by drones that are also used in commercial operations under part 107. Given the language in the preamble, the Coalition seeks confirmation from the Board that it will investigate hobbyist/modeler aircraft accidents involving death or serious injury to a person.

Operations resulting in substantial damage to a drone but no death or serious injury to a person -- changing from damage to the drone to damage to property other than the drone

The preamble explains that the Board intends the proposed definition to cover operations in higher risk environments, such as over assemblies of people or package delivery operations, rather than using a weight threshold. The Coalition supports this objective, but urges the Board to adapt the FAA's definition that refers to damage not to the drone but to property other than the drone.

"Substantial damage" in the NTSB's current and proposed definition refers to damage to the aircraft, whereas in the FAA's definition of "unmanned aircraft accident" in 14 C.F.R. 107.9 (Accident reporting), damage refers to damage to property "other than to the small unmanned aircraft." Relating to substantiality, the FAA excludes property damage that either does not exceed \$500 to repair or the fair market value of the property, in the event of total loss, does not exceed \$500. The FAA adopted this definition after considering many comments expressing a shared concern that using damage to the drone as well as not including a monetary threshold would impose an undue administrative burden on both the drone industry and the FAA without providing a corresponding safety benefit from investigations of such events.

The FAA explained its selection of \$500 in the preamble to the part 107 final rule.

The FAA agrees with commenters who suggested that injuries and property damage falling below certain thresholds should not be reportable. Requiring remote pilots in command to report minimal injuries (such as a minor bruise from the unmanned aircraft) or minimal property damage (such as chipping a fleck of paint off an object) would impose a significant burden on the remote pilots. This burden would not correspond to a safety/oversight benefit because an operation resulting in minimal injury or minimal property damage may not correspond with a higher likelihood of a regulatory violation.

81 Fed. Reg. 42063, 42177 (June 28, 2016).

Property damage below \$500 is minimal and may even be part of the remote pilot in command's mitigations to ensure the safety of the operation. For example, a remote pilot in command may mitigate risk of loss of positive control by positioning the small UAS operation such that the small unmanned aircraft will hit uninhabited property in the event of a loss of positive control. However, property damage above \$500 is not minimal, and as such, this rule will require reporting of a small UAS accident resulting in property damage exceeding \$500.

81 Fed. Reg. at 42178. The Coalition agrees with the FAA's example of a remote pilot who decides to crash the drone to avoid the risk of collision with a person or property. Even if the Board does not agree to revise its focus from the aircraft to property other than the aircraft, drones that are crashed intentionally by the operator should not be reportable.

We believe that the NTSB's proposal to retain the focus on damage to the aircraft while expanding the definition of unmanned aircraft would likewise create a substantial resource burden upon the NTSB and the UAS proponent without measurably improving the overall safety or reliability of UAS operations. A proper focus on allowing the NTSB to "quickly respond to events with safety significance," 86 Fed. Reg. at 27550, where there is no death or serious injury, should consider damage -- over a certain threshold -- to property other than the drone.

UAS that will hold an airworthiness certificate or section 44807 approval are often small, lightweight, and designed with materials and features that substantially absorb the energy and resultant damage of a potential collision. These airframe designs and manufacturing techniques often intentionally sacrifice the integrity of the aircraft to help ensure the safety of people and property in the event of a collision. The NTSB's proposed change would de-incentivize the incorporation of such features by focusing on the level of damage to the airframe instead of the much more relevant level of damage to persons or property.

The proposed revised definition would result in required investigations for events that incur no measurable impact upon property. This would needlessly waste the time and resources of both the UAS operator and the government, and has the potential to substantially impact the financial viability of commercial drone operations.²

The Coalition also recommends the NTSB adapt the \$500 threshold in the FAA's definition in 14 CFR 107.9 for the reasons stated by the FAA in the preamble to the part 107 final rule quoted above.

Operations resulting in substantial damage but no death or serious injury to a person -- excluding operations under an experimental category airworthiness certificate

The term "holds an airworthiness certificate" would cover experimental category airworthiness certificates. Operations in the experimental category are for research and development purposes; commercial operations are not permitted. Thus, these operations are not conducted in a high risk environment. Therefore, the Coalition supports including any aircraft that holds an airworthiness certificate other than in the experimental category.³

Operations resulting in substantial damage but no death or serious injury to a person -- approvals should be limited to exemptions under section 44807

The preamble notes that 49 U.S.C. 44807 authorizes "approvals under the exemption processes" and elsewhere uses the term "airworthiness approval." 86 Fed. Reg. at 27551. The Coalition supports limiting the definition of "unmanned aircraft accident" to operations involving an aircraft holding an airworthiness certificate or exemption under section 44807. Section 44807 does not use the term "airworthiness approval" and does not require the Secretary of

² The Coalition recognizes that 49 C.F.R. 830.5 requires reporting of any incident in which an aircraft causes \$25,000 in damages to property other than aircraft. This provision was likely drafted with legacy aircraft in mind. While not within the scope of this rulemaking, the Coalition wishes to refute the notion that because NTSB already has a definition of accident that includes damage to property in section 830.5, the definition of unmanned aircraft accident in section 830.2 must focus on damage to the aircraft.

³ The preamble states that as "drone delivery and other applications develop, airworthiness certification will become more prevalent for certain unmanned aircraft similar to that of manned aircraft." While the UAS industry supports airworthiness certification, the FAA has not yet issued a single airworthiness certificate for commercial operations.

Transportation to approve the airworthiness of an aircraft; rather, the determination is whether the aircraft, in consideration of a number of factors, including the nature of the operation, creates “a hazard to users of the national airspace system or the public.” Moreover, in granting exemptions under section 44807, the FAA does not make an explicit determination of airworthiness. The Coalition seeks confirmation that the NTSB intends the term “airworthiness approval” to capture all exemptions under section 44807.

The Coalition also seeks clarification that part 107 operations, including operations for which a waiver under part 107 has been granted, are not covered by this proposal. Operations under Part 107, even pursuant to a part 107 waiver, are not considered flights in a high risk environment, which we believe is the NTSB’s focus of this proposed rule.

The preamble states the proposal --

will only affect operations under part 107 that apply to small UAS that weigh less than 55 lbs. and hold an airworthiness certificate. As for the remaining small UAS operated under part 107 that do not hold airworthiness certificates or approvals, the “airworthiness certificate or approval” criteria in the proposed definition will not apply[.]

86 Fed. Reg. 27551. These statements are not an accurate reflection of the FAA’s regulatory framework at this time. Operations of a UAS that weighs over 55 lbs. may be authorized only by exemption under section 44807, and thus we believe they would be covered by the proposed definition if an exemption under section 44807 is considered an “airworthiness approval” as the preamble suggests.

Moreover, part 107 does not require airworthiness certification. An aircraft with an airworthiness certificate will operate under part 91 or part 135, if conducted by an operator holding an air carrier certificate. The NTSB is proposing to link the term “approval” to exemption authority under section 44807, not to operations under part 107. Thus, it is not correct that the proposal will “only affect operations under part 107[.]” In fact, as we read the proposed definition with respect to substantial damage, as written and referenced elsewhere in the preamble, it will *not* affect any operation under part 107, unless that operation is conducted pursuant to a section 44807 exemption.⁴

The proposal does not explicitly address waivers granted under part 107. A waiver is at least in the lay sense an “approval.” Moreover, the authority for part 107 is section 333 of Public Law 112-95, which was superseded by section 44807. Therefore, all operations under part 107 could be considered to be “approved” operations, or at least those operations conducted under a waiver granted under part 107. In consideration of the NTSB’s intention to cover only operations in higher risk environments, the Coalition supports limiting the proposed definition, with respect to substantial damage (revised to relate to property other than the drone) where there is no death or serious injury, to exemptions issued under section 44807, thus *excluding* any part 107 operation (including an operation conducted under a part 107 waiver), unless that aircraft is being operated under a section 44807 exemption.

⁴ In some exemptions issued under section 44807 involving agriculture operations under part 137 and using aircraft under the 55-lb. limit, the FAA has referred to these operations as also conducted under part 107.

The Coalition thus recommends paragraph (2) of the definition of “unmanned aircraft accident” of section 830.2 (2) be revised to read:

(2) The aircraft (i) holds an airworthiness certificate, other than an experimental category airworthiness certificate, or an approval under section 44807 of title 49 United States Code, and (ii) where substantial damage is sustained to property other than the unmanned aircraft, unless one of the following condition is satisfied: the cost of repair (including materials and labor) does not exceed \$500 or the fair market value of the property does not exceed \$500 in the event of total loss.

NTSB should engage with FAA to eliminate uncertainty and reduce duplication with respect to investigatory authority.

While the NTSB proposal does not address FAA investigations of unmanned aircraft accidents, the Coalition recommends the NTSB and FAA agree on criteria to determine whether the NTSB or FAA should be the lead agency of an UAS accident investigation, consistent with FAA Order 8020.11D.

In sum, the Coalition seeks a revision to the definition of “substantial damage” to related to property other than the drone; and a revision to the proposed language to exclude experimental category aircraft; and a clarification that the NTSB’s use of the term “airworthiness approvals” means exemptions under section 44807.

Respectfully submitted,

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