

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CERTIFICATE OF WAIVER

ISSUED TO

Causey Aviation Unmanned, Inc.
Responsible Person: Jeffrey Causey
Waiver Number: 107W-2021-02857

ADDRESS—

6120 Smithwood Rd.
Liberty, NC 27298

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the provisions contained in this certificate.

OPERATIONS AUTHORIZED

Small unmanned aircraft system (sUAS) operations over human beings; Small unmanned aircraft system (sUAS) operations over a moving vehicle.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR §107.39—Operation over human beings, and
14 CFR §107.145—Operations over moving vehicles

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 32, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from October 22, 2021, to October 31, 2022, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

General Aviation and Commercial Division, AFS-800

SPECIAL PROVISIONS ISSUED TO
Causey Aviation Unmanned, Inc.

General.

This Certificate of Waiver is an amendment which supersedes and replaces Waiver 107W-2021-00533A issued to Causey Aviation Unmanned, Inc. for operations under 14 CFR 107. Waiver 107W-2021-00533A is no longer valid.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200 and § 107.205. Pursuant to these authorities, the Administrator finds that the proposed small unmanned aircraft (sUA) operation can be conducted safely under the provisions of this Certificate of Waiver (Waiver) as listed below because you have established adequate mitigations for risks involved with operating your sUA in the manner you described. Adherence to the provisions of this Waiver establishes the required level of safety within the national airspace system.

The Administrator may cancel this Waiver at any time. As a general rule, this Waiver may be canceled when it is no longer required, there is an abuse of its provisions, or when unforeseen safety factors develop. Failure to comply with any provision listed below is a violation of the terms of this Waiver and will serve as justification for cancellation.

List of Regulations Waived by Section and Title. The following regulations are waived:

14 CFR § 107.39, Operations over human beings, is waived to allow sUA operations over human beings who are not direct participants, necessary for the safe operation of the small unmanned aircraft;

14 CFR § 107.145, Operations over moving vehicles, is waived to allow sUA operations over a moving vehicle.

No part of this waiver will function as an airspace authorization under 14 CFR § 107.41. The FAA's Air Traffic Organization responds directly to requests for such authorizations.

Common Special Provisions. The Responsible Person is directly responsible for safety of operations conducted under this Waiver and will ensure the Remote Pilot in Command (remote PIC), manipulator of the controls, and visual observer(s) (VO)¹ comply with all provisions of this Waiver.

1. The Responsible Person listed on the Waiver is responsible to the FAA for the safe conduct of the operations. Prior to conducting operations that are the subject of this Waiver, the Responsible Person:
 - a. Must ensure the remote PIC, manipulators of the controls, and VO(s) are informed of the terms and provisions of this Waiver and strictly observe the terms and provisions herein;
 - b. Must ensure the remote PIC, manipulators of the controls, and VO(s) are informed and familiar with part 107 regulations; and
 - c. Evidence of the above (a and b) must be documented and must be presented for inspection upon request from the Administrator or an authorized representative;

¹ Title 14 CFR § 107.3 defines the term "visual observer." Any VO participating in operations conducted under this Waiver must meet the requirements listed in § 107.33 throughout the duration of flight operations.

2. This Waiver may not be combined with any other waiver(s), authorization(s), or exemption(s) without specific authorization from the FAA;
3. The FAA has the authority to cancel or delay any or all flight operations if the safety of persons or property on the ground or in the air are in jeopardy or there is a violation of the terms of this Waiver;
4. A copy of this Waiver must be accessible and available to the remote PIC at the ground control station during sUA operations that are the subject of this Waiver;
5. The Responsible Person listed on this Waiver must maintain a current list of pilots by name and remote pilot certificate number used in operations under this Waiver. This list must be presented for inspection upon request from the Administrator or an authorized representative;
6. The Responsible Person listed on this Waiver must maintain a current list of sUA by registration number(s) used in operations under this Waiver. This list must be presented for inspection upon request from the Administrator or an authorized representative;
7. For the purposes of this Waiver, direct participants are the remote PICs, persons manipulating the controls, VOs, and any persons whose involvement is necessary for safety of the sUA operation. All other persons are considered non-participants;

Operations Over Human Beings and Moving Vehicle Special Provisions sUAS operations may be conducted over human beings and moving vehicles provided:

OPERATIONAL PROVISIONS

8. All operations conducted under this Waiver must use one or more VO;
9. All individuals directly participating in the operation of the sUAS must be easily identifiable visually (e.g., apparel, safety vests);
10. Within the previous 7 calendar days prior to operations, the responsible person and remote PIC must have verified the parachute system has no known safety defects that would alter the efficacy or safety of the parachute system while operating the sUA over human beings or moving vehicles;
11. The Responsible Person must establish and maintain a Safety Management System (SMS) appropriate for the size, scope, and complexity of the waived operation. Guidance on establishing and maintaining an SMS is available in FAA Advisory Circular 120-92B or current revision. This program must be made available upon request by the Administrator;
12. The Responsible Person listed on this Waiver must ensure each remote PIC is trained in a manner consistent with how the sUAS will be operated under this Waiver and in operational procedures including evasive and emergency maneuvers. Training operations may only be conducted under the standard requirements of part 107 (without waiver). Training during operations over moving vehicles or human beings is prohibited;
13. Launch and recovery areas for normal and abnormal operations must be designated and marked to keep any human being not a direct participant out of the areas prior to, during, and immediately following flight operations;

14. If the remote PIC loses command or control link with the sUA, the sUA must follow a predetermined route to either reestablish link or immediately recover/land within the designated launch and recovery area(s);
15. The remote PIC is responsible for halting or canceling operations if, at any time, the safety of human beings or property on the ground or in the air is in jeopardy, or if there is a failure to comply with the provisions of this Waiver;
16. Flight operations recordkeeping requirements. Records shall be retained for a period of 90 days after the expiration date of the Waiver. The Responsible Person shall keep at its principal business office or at other places approved by the Administrator or authorized representative, and shall make available for inspection by the Administrator or an authorized representative the following:
 - a. For each sUA flight conducted under the terms of this waiver:
 - i. Date and location of operation
 - ii. Registration number of the sUA and serial number of installed parachute system,
 - iii. Number of flights,
 - iv. Make and model of the sUA,
 - v. Name and certificate number of the remote PIC,
 - vi. Name and certificate number (if applicable) of the Visual Observer, and
 - vii. Duration of the sUA operation;
 - b. sUA equipment malfunctions. sUA equipment malfunctions include, but are not limited to, the following:
 - i. Onboard flight control system,
 - ii. Any portion of the navigation system to include GPS functionality,
 - iii. Power plant malfunction or failure,
 - iv. Battery malfunction or failure,
 - v. Electrical power system malfunction,
 - vi. Control station malfunction or failure, and
 - vii. Loss of control link within the sUAS;
17. Within 72 hours of any parachute deployment or a sUA failure where the parachute did not deploy as designed, an email must be sent to 9-afs-820-Part107Reports@faa.gov . The email must include at least:
 - a. Date, time, and location of parachute deployment or failure to deploy,
 - b. A description of events leading up to the parachute deployment or failure to deploy,
 - c. The serial number of the parachute,
 - d. Name of the remote PIC,
 - e. If the sUA impacted a person, and
 - f. Any injuries caused to a person;
18. For operations conducted under this Waiver, the maximum weight of the sUA, including everything that is on board or otherwise attached to the aircraft, including the weight of the payload, may not exceed 34.2 pounds;

19. During sUAS operations subject to this Waiver the payload carried in the package delivery container must be secured in a manner that prevents the payload from shifting within the container during flight, and during a parachute deployment;
20. sUAS operations conducted in accordance with this Waiver must adhere to all manufacturer guidelines, recommendations and limitations for the sUAS and parachute system;
21. Operations conducted under this Waiver may occur with the sUAS and parachute system described in the waiver application. Proposed operations of any other manufacturer, model of sUA, or parachute system will require a new waiver application or a request to amend this Waiver;

TECHNICAL PROVISIONS

22. Any modification to the sUAS or parachute is prohibited. Repair and replacement of damaged sUA components is allowed with a replacement part that is exactly the same as the original. No substitutions are allowed unless a new waiver application is submitted;
23. If deployed for any reason, prior to a flight conducted under the terms and conditions of this Waiver, the parachute must be repacked by the manufacturer or a designated representative;
24. For sUAS operations where GPS signal is necessary to safely operate the sUA, the remote PIC must immediately recover/land the sUA upon loss or degraded of GPS location information;
25. If communication between the VO and the remote PIC is by use of an electronic device;
 - a. The device must be full duplex,
 - b. The remote PIC's device must be hands-free, and
 - c. There must be a reliable back-up communication method;
26. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver;
27. All emitters used in sUAS must be in compliance with all applicable FCC regulations and all provisions of the FCC authorization granted for the emitter. A FCC experimental authorization may not be used for sUAS operations under this Waiver;

ENVIRONMENTAL PROVISIONS

28. During sUA operations over non-participants, the parachute system must be operational and comply with ASTM 3322-18 as described in the waiver application;
29. The sUA may not be operated lower than 214 feet over any non-participant;
30. During sUAS operations subject to this Waiver, the sUA may not sustain operations over non-participating persons or moving vehicles. For the purposes of this waiver, sustain is defined as loitering, hovering, and continuous or sequential overflight of non-participating persons or moving vehicles, including the payload delivery portion of the flight;

31. sUAS operations over open air assemblies of persons is prohibited, unless, prior to sUAS operations pursuant to this Waiver, the responsible person contacts and coordinates the sUAS operation with local law enforcement and the event's security planner. For this Waiver, contacts and coordinates means:

- a. Providing a copy of this Waiver,
- b. Providing a schedule of planned sUAS operation(s) times,
- c. Providing the location the remote PIC will be operating the sUAS from,
- d. Providing the remote PIC's phone number where they can be contacted during sUAS operations, and
- e. Receiving written confirmation from local law enforcement and the event security planner confirming the above information has been provided to them;

If the event does not have a security planner or security present, only the local law enforcement contact and coordination of this provision must be accomplished; and

32. Operations conducted under this Waiver are limited to operational locations described in the Waiver application.