



FAA UAS SYMPOSIUM

Drone Operations Over 55 Pounds

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Introduction



- The Small Unmanned Aircraft System Rule (14 CFR part 107) is only applicable to unmanned aircraft that weigh less than 55 pounds at takeoff. There are several different pathways to fly an unmanned aircraft that weighs 55 pounds or more.



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Pathways to operations



- Commercial Operations
 - Type certificate
 - 49 U.S.C 44807 Grant of exemption
- Special Airworthiness Certificate operations
- Recreational flyers
- Public Aircraft Operations



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Assess your UAS Program

A 44807 may be appropriate for you if:

- Your aircraft is reliable and you have the data and testing documentation to support its safe operation;
- The pilot and crew is qualified, well trained and has the experience and skills needed to perform the proposed operation; and
- Your operating and emergency procedures adequately mitigate risk in the air and on the ground.

What are Petitions for Exemption?



- Relief from an FAA regulation (14 CFR)
- Petitioners must follow procedures in 14 CFR part 11 and demonstrate that relief:
 - a. Is in the public interest, and
 - b. Would not adversely affect safety or would provide a level of safety equal to that provided by the regulation. (This is particularly challenging for UAS, since they are not certified aircraft)



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How Does Section 44807 Help Us?



Generally, the FAA cannot issue an exemption from specific statutory mandates such as requiring airworthiness certificates. The statutory provision in 49 U.S.C. 44807, sets aside that prohibition. This allows the FAA to grant relief to a petitioner from the requirement to hold an airworthiness certificate for the UAS when certain criteria are met.



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49 U.S.C. §44807 Special authority for certain unmanned aircraft systems



- The Secretary of Transportation (S-1) shall use a risk-based approach to determine if certain UAS may operate safely in the national airspace system
- S-1 authority expires on September 30, 2023.



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Prepare your petition along with the supporting information



- The required contents of a petition are in 14 CFR Part 11.
- Go to Regulations.gov (the public docket). Follow the instructions for submitting a petition for exemption.
- Submit your proprietary information separately



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Information you must provide:

At a minimum, we need the following information to make a safety recommendation:

- Training and qualification of crew
- Operations and Maintenance Manuals
- Procedures
- Specifications and performance of UAS
- Operating areas (May need a blanket or specific COA)
- Risk assessment (Follow SORA, ASTM, etc.)

How the FAA makes a safety determination



- An FAA team assesses the risk of the proposed operation to the NAS and to persons and property on ground.
- If the data supports that the operation is as safe as the regulations require, then we will recommend that the Secretary approve the proposed operation and we are able to grant the petition.



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Request for Information

- Address the request promptly and completely.
- Our processing of your exemption is on hold until you get back to us with the requested information/data.
- If we don't hear back from you, we will close the case without further action.

Federal Register Notice



- Purpose: Provide the public with an opportunity to comment and provide input
- Must be done for precedent-setting grants or partial grants
- Must contain enough information for the public to make meaningful comments
- Standard comment period is 30 days.



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Assess your UAS Program



A Special Airworthiness Certificate may be appropriate for you if:

- The reliability of your aircraft is uncertain or you do not have the data and testing documentation to support its safe operation;
- The pilot and crew is not qualified, well trained or does not have the experience and skills needed to perform the proposed operation; and
- You are unable to demonstrate that your operating and emergency procedures adequately mitigate risk in the air and on the ground.



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Special Airworthiness Certificates

Special airworthiness certificates in the experimental category (SAC-EC) –

- Issued to UAS and manned aircraft integrated with UAS technology, which do not meet the airworthiness requirements for a standard airworthiness certificate.
- Issued for research and development (R&D), showing compliance with regulations, crew training, exhibition, and/or market survey, as defined in 14 CFR 21.191.
- Use FAA Form 8130-7 and follow instructions to apply.

UAS Test Sites

For assistance with the testing and data collection for your safety case and risk assessment, you may work with a UAS Test Site.

1. University of Alaska
2. State of Nevada
3. New York's Griffiss International Airport
4. North Dakota Department of Commerce
5. Texas A&M University – Corpus Christi
6. Virginia Polytechnic Institute and State University (Virginia Tech)
7. New Mexico State University

Questions?

