

Purdue University
Attn: Alex Helms
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Address: 4425 East County Road 350 North, Butlerville, Indiana, 47223

Dear Mr. David Reaves,

This letter is in response to an electronically received letter on Monday, November 22nd 2021 in request of missing information from a petition submitted on behalf of Purdue University (Docket No. FAA-2021-0855).

In addition to the relief sought from specific sections of CFR 14 parts 61 and 91, Purdue University requests relief from certain sections in 14 CFR part 137. The following sections are:

- 14 C.F.R. 137.19(c), Certification Requirements, Commercial operator – pilots
- 14 C.F.R. 137.19(d), Certification Requirements- Aircraft
- 14 C.F.R. 137.19(e)(2)(ii), Certification Requirements; Knowledge and skill tests; skills; approaches to the working area
- 14 C.F.R. 137.19(e)(2)(iii), Certification Requirements; Knowledge and skill tests; skills; flare-outs
- 14 C.F.R. 137.19(e)(2)(v), Certification Requirements; Knowledge and skill tests; skills; pull-ups and turnarounds
- 14 C.F.R. 137.31(a), Aircraft Requirements; Certification Requirements
- 14 C.F.R. 137.31(b), Shoulder Harnesses
- 14 C.F.R. 137.33(a), Carrying of certificate; Certificate carried on the aircraft
- 14 C.F.R. 137.33(b), Registration and airworthiness certificates available
- 14 C.F.R. 137.41(c), Personnel; Pilot in command; demonstration of knowledge and skills
- 14 C.F.R. 137.41(c), Personnel; Pilot in command; commercial certificate
- 14 C.F.R. 137.42, Fastening of safety belts and shoulder harnesses

Reason and Extent of Relief

- 14 C.F.R. 137.19(c) - The petitioner requests to be exempt from this provision since the UAS pilot will hold a Remote Pilot Certification. The Remote Pilot Certification process tests the pilot's knowledge of FAA regulation and rules specific for UAS usage. Public safety will not be adversely affected with this exemption because the Remote Pilot Certification tests the knowledge of the UAS pilot on material specific to UAS use which will be more applicable to UAS usage when making an application. Additionally, the pilot will undergo skill and knowledge testing by the chief supervisor to ensure practical application of knowledge and skill.
- 14 C.F.R. 137.19(d) – The petitioner requests to be exempt from this provision since the UAS is not certified as is with a manned aircraft. Prior to operation, the UAS will be inspected for any damage or issues that may cause concern during flight. Additionally, the pilot is required to follow a regular maintenance schedule to ensure the components of the aircraft are functioning properly. Any UAS deemed unfit to fly will be out of commission until proper maintenance

returns the aircraft to a condition acceptable for flight according to the preflight checklist and maintenance log.

- 14 C.F.R. 137.19(e)(2)(ii), 14 C.F.R. 137.19(e)(2)(iii), 14 C.F.R. 137.19(e)(2)(v) – The petitioner requests to be exempt from these provisions since the knowledge and skills testing is not relevant to the UAS operator. Many of the knowledge topics and required skills are specific to manned aircraft, but not practical to UAS operators. An equivalent level of safety will be achieved by testing the operator's skill and knowledge during certification of the pilot. The pilot will demonstrate competency through examination of UAS operation skills and knowledge.
- 14 C.F.R. 137.31(a), The petitioner requests to be exempt from this provision since the UAS is not certified as is with a manned aircraft. Prior to operation, the UAS will be inspected for any damage or issues that may cause concern during flight. Any UAS deemed unfit to fly will be out of commission until proper maintenance returns the aircraft to a condition acceptable for flight.
- 14 C.F.R. 137.31(b), The petitioner requests to be exempt from this provision since the shoulder harness is impractical for UAS pilots. The rule is intended for manned aircraft; therefore, the exemption would pose no undue risk to the public.
- 14 C.F.R. 137.33(a)(b), The petitioner requests to be exempt from this provision and instead carry all necessary paperwork with the Pilot in Command. The rules are more pertinent to manned aircraft and impractical for UAS operations. Public safety will not be adversely affected because all required paperwork will be with the Pilot in Command during operation.
- 14 C.F.R. 137.41(c), The petitioner requests to be exempt from this provision for similar reasons as stated for 14 C.F.R. 137.19(c) for knowledge and skill tests. Public safety will not be adversely affected with this exemption because the Remote Pilot Certification tests the knowledge of the UAS pilot on material specific to UAS use which will be more applicable to UAS usage when making an application. Additionally, the pilot will undergo skill and knowledge testing by the chief supervisor to ensure practical application of knowledge and skill.
- 14 C.F.R. 137.42, The petitioner requests to be exempt from this provision for similar reasons as stated for 14 C.F.R. 137.31(b). The safety belt and shoulder harnesses are impractical for UAS operation. The rule is intended for manned aircraft; therefore, the exemption would pose no undue risk to the public.

The request for information also includes a comprehensive flight operations and procedures manual, comprehensive operational risk and safety manual, and aircrew training and procedures program manual. These manuals will be attached to this reply.

Please contact me if the information provided is insufficient or if additional information is needed.

Sincerely,
Alex Helms
12/3/2021