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**A Path for Unmanned Aircraft
Systems (UAS) Through a
Section 333 Exemption**

*Congress passed and President Obama signed the **Federal Aviation Administration Modernization and Reform Act (FMRCA)**, Public Law 112-95, February 14, 2012

***Sec. 332** authorizes the FAA to implement a plan for **integration of civil unmanned aircraft systems (UAS)** into national airspace system (NAS)

***Sec. 333** established and authorized special rules for certain UAS

* Sec. 333 - (a) Secretary of Transportation shall determine if certain UAS may operate safely in the NAS before completion of the plan and rule-making required by section 332;

The Secretary shall determine, at a minimum—

* (1) which types of UAS, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the NAS or the public or pose a threat to national security; and

- *On February 15, 2015, the published a NPRM that would allow routine commercial use of certain small UAS (under 55 lbs.) in today's NAS, while maintaining flexibility to accommodate future technological innovations.
- *The FAA's NPRM offered safety rules for small UAS conducting non-recreational or non-hobby operations. (The NPRM defined permissible hours of flight, line-of-sight observation, altitude, operator certification, use of visual observers, aircraft registration and markings, and operational limits.)
- *Since the FAA has yet to release the Final Rule (14 C.F.R. Part 107), Sec. 333 waiver applications can be filed to permit commercial UAS operations.

UAS Exemptions To Date (Jan 2016)

- *As of December 30, 2015, the FAA has granted 2,799 Petitions under Section 333 to a total of over 2,300 operators.**
- *There are over 3,000 more Section 333 Petitions currently pending approval.**
- *The FAA aims to reach a decision on each Petition within 120 days of submission.**

Sect. 333 Petition Process

- *What is the sec. 333 process?
- *How can you apply?
- *What is necessary to apply for a sec. 333 exemption?
- *Need for civil Certificate of Authorization (COA).
- *COA is an authorization issued by the Air Traffic Organization for a specific UA activity.

**14 C.F.R. Part 11, Subpart A,
*Rulemaking Procedures, Petitions For
Rulemaking and Exemption***

14 C.F.R. § 11.61, *May I ask FAA to adopt, amend, or repeal a regulation, or grant relief from the requirements of a current regulation?*

(b) Using a petition for exemption, you may ask FAA to grant you relief from current regulations in 14 C.F.R.

Petition For Exemption

14 C.F.R. § 11.81, *What information must I include in my petition for an exemption?*

- (a) Your name and mailing address and, if you wish, other contact information such as a fax number, telephone number, or e-mail address;
- (b) The specific section or sections of 14 C.F.R. from which you seek an exemption;
- (c) The extent of relief you seek, and the reason you seek the relief;
- (d) The reasons why granting your request would be in the public interest; that is, how it would benefit the public as a whole;
- (e) The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which you seek the exemption;
- (f) A summary we can publish in the Federal Register, stating:
 - (1) The rule from which you seek the exemption; and
 - (2) A brief description of the nature of the exemption you seek;
- (g) Any additional information, views or arguments available to support your request; and

Petition For Exemption

14 C.F.R. § 11.35, Does FAA include sensitive security information and proprietary information in the Federal Docket Management System (FDMS)?

(b) Proprietary information. When we are aware of proprietary information filed with a comment, we do not place it in the docket. We hold it in a separate file to which the public does not have access, and place a note in the docket that we have received it. If we receive a request to examine or copy this information, we treat it as any other request under the Freedom of Information Act (5 U.S.C. 552). We process such a request under the DOT procedures found in 49 C.F.R. part 7.

Summary Grants

- * If a Petition has been granted for a particular UAS platform, a subsequent Petition submitted requesting exemption for the same UAS will be considered under the summary grant process
- * Petitions eligible for a summary grant do not require that UAS operating documents be submitted with the Petition
- * The summary grant process was established to help expedite Grants of Exemption for Petitions that were not requesting the operation of a new UAS platform

Grants of Exemption

- *Grants of Exemption fall under two main categories of operations:

- *Aerial Data Collection and

- *Motion Picture and Television Filming

- *Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA.

Grants of Exemption

- *There have been exemptions granted for both gasoline powered and battery powered UAS
- *UAS granted exemption have been in the form of miniature helicopters, fixed-wing aircraft, and multi-rotor craft
- *There have been exemptions for both remote controlled UAS and tethered UAS
- *Kansas State University has been granted an exemption that allows them to offer UAS training for compensation or hire

Conditions and Limitations

- * Each Grant of Exemption includes conditions and limitations applicable to operation
- * The mostly standardized set of Conditions and Limitations included in recent Grants of Exemption sets out:
 - * UAS must be no heavier than 55 pounds including payload and travel no faster than 87 knots (100 mph)
 - * UAS must be operated at an altitude of no more than 400 feet above ground level
 - * All operations must be conducted in accordance with a Certificate of Waiver or Authorization (COA).
 - * The UA must be operated within Visual Line of Sight (VLOS)

Conditions and Limitations

- * All operations must utilize a visual observer (VO) and the Pilot in Command (PIC) and VO must be able to communicate verbally at all times
- * A copy of the exemption and all operating documents must be accessible during UAS operations and made available to the Administrator upon request
- * Any UAS that has undergone maintenance or alterations that affect UAS operations or flight characteristics must undergo a functional test prior to conducting further operations
- * The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation
- * Prior to each flight, the PIC must conduct a pre-flight inspection and determine that the UAS is in a condition for safe flight

Conditions and Limitations

- * The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components. The operator must also follow all manufacturer safety bulletins
- * A PIC must hold at minimum a sport pilot certificate and either an FAA issued medical certificate or a valid U.S. issued driver's license. The PIC must meet flight review requirements as specified in 14 C.F.R. § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate
- * The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles, and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 C.F.R. § 61.51(b).
- * UAS operations may not be conducted during night, as defined in 14 C.F.R. § 1.1. All operations must be conducted under visual meteorological conditions (VMC).

Conditions and Limitations

- * The UA may not operate within 5 nautical miles of an airport reference point (ARP) ... unless a letter of agreement (LOA) with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder.
- * The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.
- * If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.
- * The PIC must abort the flight in the event of unpredicted obstacles or emergencies.
- * The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least 5 minutes or with the reserve power recommended by the manufacturer if greater.

Conditions and Limitations

- * All aircraft operated in accordance with the exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.
- * After March 31, 2016, this will likely also include an alternative means of compliance through 14 CFR part 48, the new web-based system
- * The UA must remain clear and give way to all manned aviation operations and activities at all times.
- * The UAS may not be operated from any moving device or vehicle.

Conditions and Limitations

- * All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
- * All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

Conditions and Limitations

- *Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the NTSB.

UAS Registration

- * No state or local government may impose an additional registration requirement on the operation of UAS in navigable airspace without first obtaining FAA approval.
- * On December 21, 2015, the FAA opened its web-based registration system for operators of hobby and model UAS.
- * On March 31, 2016, the FAA plans to expand its web-based registration system for operators of civil UAS who have been granted an exemption under Section 333.

UAS Registration

- *Civil Operators, including those operating under a Section 333 Exemption, are required to register each individual UAS every three years
- *Information is required to be kept up to date and any change must be reported within 14 days of the change (i.e., change of address, sale, destruction, etc.)

State UAS Legislation

*In 2015, 45 states have considered 168 bills related to drones.

EXAMPLES OF STATE AND LOCAL LAWS FOR WHICH CONSULTATION WITH THE FAA IS RECOMMENDED

- *Operational UAS restrictions on flight altitude, flight paths; operational bans; any regulation of the navigable airspace.
- *Mandating equipment or training for UAS related to aviation safety such as geo-fencing would likely be preempted.

EXAMPLES OF STATE AND LOCAL LAWS WITHIN STATE AND LOCAL GOVERNMENT POLICE POWER

Examples include:

- * Requirement for police to obtain a warrant prior to using a UAS for surveillance.
- * Specifying that UAS may not be used for voyeurism.
- * Prohibitions on using UAS for hunting or fishing, or to interfere with or harass an individual who is hunting or fishing.
- * Prohibitions on attaching firearms or similar weapons to UAS.

FAA Enforcement Actions

- * *Administrator, FAA v. Pirker*
- * Commercial operation of a UAS over UVA
- * \$10,000 Civil Penalty
- * Law Judge initially dismissed case ruling that there were no FAA regulations for UAS
- * FAA appealed the Law Judge's initial decision to the NTSB and the NTSB agreed with the FAA's position that UAS meet the legal definition of an "aircraft"

FAA Enforcement Actions

- *The FAA proposed a \$1.9 million dollar civil penalty against SkyPan International, Inc. on October 6, 2015.
- *The FAA alleged that the company conducted 65 unauthorized commercial UAS flights over various locations in New York City and Chicago between March 21, 2012 and Dec. 15, 2014. The flights involved aerial photography. 43 flew in the highly restricted New York Class B airspace.
- *SkyPan did not have a Certificate of Waiver or Authorization for the operations.

B4UFLY Smartphone App

- *The FAA recently released the B4UFLY smartphone app to aid UAS operators in determining whether there are any restrictions or requirements in effect at the location where they want to fly
- *Key features of the B4UFLY app include:
 - *A clear "status" indicator that immediately informs the operator about the current or planned location. For example, it shows flying in the Special Flight Rules Area around Washington, D.C. is prohibited.

QUESTIONS?

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