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## FAA Allows First Commercial Operations of Unmanned Aircraft Systems in Continental United States

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On September 25, 2014, the Federal Aviation Administration (FAA) approved the requests of six video production companies to use unmanned aircraft systems (UAS) in their businesses.<sup>1</sup> The six companies were among the first to seek an exemption under Section 333 of the FAA Modernization and Reform Act of 2012 from various FAA requirements. Without such an exemption, the FAA takes the position that commercial use of UAS in U.S. airspace is currently prohibited.<sup>2</sup> The FAA [granted the Section 333 exemption request filed by Astraeus Aerial](#) in a comprehensive decision (the "Astraeus grant") that was then incorporated into the grants issued to the other five applicants. As of this writing, the FAA has not issued a decision with respect to the exemption request filed by a seventh motion picture entity, Flying Cam LLC. The FAA noted in its press release that [it has requested additional information from Flying Cam](#).

While the Astraeus grant relates only to the particular facts presented in the company's Section 333 exemption petition (which involves operations on closed film sets), the decision nonetheless provides significant guidance for other companies that have pending Section 333 exemption requests and others who seek to use unmanned aircraft for commercial applications. In addition, the FAA released a public [guidance document on Section 333 exemption requests](#), which is designed to provide further guidance to future applicants about the information the FAA expects to see in Section 333 exemption requests and the operating conditions under which the FAA is likely to grant such requests. This guidance generally reflects the operating conditions and other requirements set forth in the Astraeus grant.

The FAA focused its discussion of the Astraeus grant on three main topics: (1) the UAS; (2) the UAS pilot and observer; and (3) the proposed UAS operations. These operating parameters, which resulted from negotiations between the FAA and the video production industry applicants, are summarized in more detail below.

### The UAS

The UAS will be an Astraeus Aerial Cinema System V.3CS. It is a remote-controlled quadcopter configuration, with eight motors and rotors and weighs less than 55 lbs. with

<sup>1</sup> The FAA previously permitted two commercial UAS operators to use these devices in the Arctic regions of Alaska for oil and gas-related purposes. In addition, the FAA has permitted a number of governmental and law enforcement entities to conduct UAS operations in the lower 48 states. The exemptions granted to these video production companies represent the first permitted uses of commercial UAS in the continental United States.

<sup>2</sup> In March 2014, a National Transportation Safety Board (NTSB) ALJ struck down a \$10,000 FAA penalty against a commercial UAS operator that was using a small UAS similar to hobbyist aircraft, finding that the FAA did not have regulations governing the photographer's flight where analogous model aircraft were exempt from FAA regulation. *Huerta v. Pirker*, NTSB No. CP-217 (Mar. 6, 2014). An FAA appeal to the full NTSB is pending.

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batteries and gear. The device is designed to return to a specified location if the remote control connection to the pilot is lost. The devices to be used by the other video production industry applicants are of similar size and also have an emergency return function. The FAA required that the specific aircraft being used must be registered with the FAA and display an "N" registration number. This will allow the FAA to keep track of unmanned aircraft approved for commercial operations under Section 333. In addition, the UAS will be exempted from some other FAA regulatory requirements related to aircraft placarding and marking, operating handbooks, and avionics/communications equipment, as these requirements would not make sense when applied to UAS.

### Pilot and Observer

The UAS must be operated by both a pilot and a visual observer, who must scan the surrounding areas for other aircraft/potential obstacles. The UAS pilot must hold at least a private pilot certificate and a Third Class Medical Certificate. At the suggestion of Astraesus, the pilot must have logged at least 25 hours on UAS in general, 10 hours on UAS similar to the type that will be used, and 5 hours in the last 90 days on the make and model that will be used.

The pilot training and certification requirements appear to be onerous, especially given the shortage of pilots with the requisite level of training necessary to meet such requirements (and the fact that the FAA [does not currently allow schools to teach UAS operations](#)). The FAA claims that the requirement that the pilot hold at least a private pilot certificate is necessary to demonstrate that the pilot possesses aeronautical knowledge covering the fundamental principles of airspace, air regulations, and flight.

### UAS Operations

Most of the Astraesus grant discusses the proposed scope of Astraesus' operations. On a basic level, the FAA imposed some predictable limitations. Astraesus must operate the UAS pursuant to daylight Visual Flight Rules (VFR) conditions, within visual line of sight of the pilot or observer, under 400 feet above ground level, at speeds under 50 knots (about 57 MPH), and, in most cases, more than 500 feet from people not associated with the filming operation. VFR are rules that govern the procedures for conducting flight under visual conditions. The visibility limitations defining VFR conditions vary depending on the airspace, but for purposes of the Astraesus exemption, the FAA is setting the weather minimums to at least 3 "statute" miles of visibility (5,280 feet) and mandating cloud clearances of 500 feet below and 2,000 feet horizontally regardless of airspace. By way of comparison, for manned flight, the VFR weather minimum for most flights below 400 feet above ground level (AGL)<sup>3</sup> is one statute mile visibility, and the pilot must merely remain clear of clouds. The FAA did not explain why it decided to impose more stringent requirements on UAS in this regard.

The FAA also imposed some significant notice requirements on Astraesus. Pursuant to the Astraesus grant, the UAS operator must notify the local FAA Flight Standards District Office (FSDO) at least two days before conducting any commercial UAS flight operations. A Notice to Airman (NOTAM) must also be sent out to warn other aircraft about the proposed UAS

<sup>3</sup> In most instances, except for areas surrounding airports, the airspace below 400 feet AGL is Class G airspace. For most other classes of airspace, the visibility minimums are three statute miles, and the required cloud clearances are at least 500 feet below, 1,000 feet above, and 2,000 feet horizontally. Thus, the FAA applied the VFR visibility limitations for other classes of airspace to Astraesus' UAS operations.

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operations. In addition, the UAS operator must provide the FSDO with a detailed written Plan of Activities at least three days before filming activity involving the UAS. This Plan must contain, in part, a certification that the operator has permission from property owners and/or local officials to use the UAS. Lastly, the operator must report any “incident, accident or flight operation that transgresses the lateral or vertical boundaries of the operational area” to the FAA within 24 hours. Such incidents also must be reported to the NTSB.

### Conclusion

While the FAA’s decision imposes some potentially significant limitations on Astraeus and the other video production companies that received the Section 333 exemption approvals, many of these limitations were suggested by the companies themselves in their exemption requests, and, likely, in their negotiations with the FAA related to their requests. It is unclear to what degree the FAA would be willing to deviate from the operating constraints imposed in the Astraeus grant when faced with a Section 333 exemption request from a different applicant under a new set of circumstances. Certainly, in an exemption process with no hard and fast rules, it is hoped that the FAA will show flexibility, as long as the applicant can demonstrate that its planned UAS operations will achieve a sufficient level of safety. Moreover, the Astraeus grant also provides a roadmap for companies applying for Section 333 exemptions. This added clarity should help new applicants formulate their commercial UAS operating plans to address the FAA’s major areas of concern.

By the end of the year, the FAA is scheduled to launch a small UAS rulemaking that is expected to propose rules authorizing the commercial use of UAS under 55 pounds subject to certain restrictions. However, it likely will be 2016 before the FAA is able to complete the lengthy notice and comment period associated with the small UAS rulemaking. Therefore, prior to the issuance of a final rule, Section 333 exemption requests likely will remain the only avenue available for companies to obtain FAA approval to use UAS for commercial purposes.

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