

From: David Wagreich

To: Anthony Serafini

Date: February 25, 2015

Subject:

Message:

Reply to Correspondence FCC OET Experimental License Application
Regarding Astraeus Aerial – letter from Anthony Serafini

This reply to correspondence is with regard to reference number 26732. This pertains to an application for Experimental License by Astraeus Aerial, LLC to operate an unmanned aerial vehicle in accordance with Federal Aviation Administration (“FAA”) Grant of Exemption in regulatory docket No. FAA-2014-0352, Exemption No. 11062, dated September 25, 2014. This reply pertains to the FCC request to narrow the geographic scope of the license application, and to clearly identify the experimental objectives of the license. This reply also provides FCC Equipment Approval Numbers, where applicable, in response to telephone conversations with the FCC.

In regard to the request to narrow the geographic scope of the license application: the applicant reiterates the geographical limitations approved by the Federal Aviation Administration in docket FAA-2014-0352, exemption no. 11062 dated Sept 25, 2014 – namely, the operator must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption. This COA will also require the operator to request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation…” “At least three days before scheduled filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local FSDO with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO…” “The UA may not operate in Class B, C, or D airspace without written approval from the FAA. The UA may not operate within 5 nautical miles of the geographic center of a nontowered airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport’s management is obtained, and the operation is conducted in accordance with a NOTAM as required by the operator’s COA.” The specific area of operation for the proposed license will change several times per month to specific places within the United States. The applicant cannot predict the precise location(s) in advance due the nature of the client’s needs. Therefore a nation-wide license is requested subject to the restrictions outlined in the FAA docket.

Notwithstanding, if it is necessary to request individual licenses for each specific location, the applicant hereby requests expedited permitting by the FCC within the 72 hour and 3-day timeline stipulated by the FAA; and, the first few locations of operation will be as shown here:

North 33 30 07.7 Latitude, West 82 01 21.5 Longitude, Augusta National Golf Club, Augusta, GA
NAD 83 Datum, Ground Elevation 85 meters AMSL. Nearest Airport Runway is Daniel Field (3.9 km at 196 degrees from Golf Club). Operation will be within 1 mile radius of Golf Club.

North 34 26 26.5 Latitude, West 118 12 42.2 Longitude, Acton, CA
NAD 83 Datum, Ground Elevation 772 meters AMSL. The FCC TOWAIR program reports there is no airport within 5 miles. Operation will be within 5 mile radius of Test Site.

North 34 52 42.5 Latitude, West 118 15 24.1 Longitude, Willow Springs Racetrack, Rosamond, CA
NAD 83 Datum, Ground Elevation 753 meters AMSL. Nearest Airport Runway is Rosamond Skypark (4.2 km at 102 degrees from Racetrack). Operation will be within 2 mile radius of Golf Club.

Experimental Objectives, Clearly Defined: the applicant proposes a first-in-the-nation operation of its kind;

operating an unmanned aerial vehicle, commercially, to provide cinema photography for the motion picture industry, focusing first upon safe and reliable vehicle operation. The details of the proposed operation are contained at length in docket FAA-2014-0352 previously provided as an exhibit to this application. Specifically, the experimental goal is to demonstrate the advantages, both economic and safety, of using a small unmanned aerial vehicle ("sUAV") to provide video for the motion picture industry. The experiment will provide valuable data that further defines the optimum radio frequencies and modulation methods, power levels, and interference effects to aid U.S. regulating bodies such as the FCC and FAA in developing policy for the safe and proper operation of sUAV's in commercial use. Indeed, as acknowledged by the FAA, a waiver of existing government aeronautical regulation was granted to perform the experiments proposed herein. The FAA waiver purposes to further develop the operator manual upon which the waiver was granted by directing the operator to "track such revisions and present updated and revised documents to the Administrator upon request. The operator must also present updated and revised documents if it petitions for extension or amendment. If the operator determines that any update or revision would affect the basis for which the FAA granted this exemption, then the operator must petition for amendment to their exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operator's manual." Clearly much is to be learned during the proposed experimental operation.

The applicant provides the following FCC Equipment Approval numbers with regard to the transmitting equipment identified in the instant application.

Manufacturer Model	Number	No. Of Units	FCC Equipment Approval Number
EmersionRC EZUHF	2		Equipment designed for Amateur Radio Use
ReadyMade RMRC V2800MW13	6		Equipment designed for Amateur Radio Use
DJI Lightbridge	1		SS3-201402241
Futaba 14SG 2.4 GHz C2	1		AZP-T14SG24G
Paralinx Tomahawk SDI HD	1		VQS-ANNKSEX01 TX VQS-ANN36254 RX
Teradek BoltPro 2000 HD	1		VQS-AMNKHIN1 TX VQS-AMNMHIN01 RX