

NARRATIVE EXPLANATION OF OPERATION AND FREQUENCY COORDINATION

The applicant, TerraFugia, Inc., is a technology company based in the Boston, Massachusetts area that has an interest in development of UAS devices. It has obtained communications systems for these UAS, which it wishes to test on a limited basis for proof-of-concept purposes. Ultimately, the plan for deployment will be for industrial inspections. The communications system operates aboard the UAS and will be operated at a *maximum altitude of 400 feet above ground level*, with a maximum footprint of 10 miles' radius around a centerpoint. The system as currently configured can use uplink frequency bands between 1633.125 MHz and 1646.825 MHz and 1713.125-1746.875 MHz; and a downlink frequency band between 1293.125-1346.875 MHz, using a 13.7- megahertz occupied bandwidth and a G9W emission for telemetry, radio control and video data. These bands are not the bands in which the device will be configured for ultimate deployment, assuming that the proof-of-concept testing indicates that the devices will be useful for deployment. The current frequency configuration will be for initial testing purposes only in its current configuration. The proposed testing would occur at six discrete locations: three in Nevada and three in Massachusetts. Testing will occur for very brief periods, from time to time during the next six months, in these six limited geographic areas. As envisioned, assuming highest possible duty cycles for testing, each test would be less than or equal to 4 hours long. Testing would occur 2-3 days per week in Nevada (across the 3 specified sites) and 1-2 times per month in Massachusetts (across the 3 sites). The applicant does not envision any extension or renewal of this STA, if granted.

The testing pursuant to this STA will be done using ground and UAS-mounted transmitters using 13M7G9W emissions, with very low duty cycles and at very low power spectral density. The radios transmit at 1watt TPO and ERP and the flight ceiling of the UAVs would be 400 feet above ground level at any location.

The "Stop Buzzer" contact for this test will be Mr. Sean Tierney, the Engineering Manager, Electrical and Software for TerraFugia. His mobile number is 781-404-6201.

The purpose of this STA is limited to preliminary testing of hardware, preparatory to future development of a UAS product using a different frequency configuration. This is a separate device from that which is subject to testing pursuant to WS9XHV, File No. 0901-EX-ST-2021.

Should any report of interference be received, all testing will cease immediately, and the devices will not be operated at all unless and until the interference has been resolved to the reasonable satisfaction of the complainant. It is understood that some of the bands in which this preliminary testing will occur is spectrum allocated to the United States government and is in one or more of the Part 15 restricted bands. The applicant has no expectation that any regular operation by the applicant will be possible in any of the subject bands, and no need for such.

Should any question arise concerning this proposed STA, kindly contact the undersigned communications counsel.

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