

AeroVironment, Inc.

STATEMENT ACCOMPANYING REQUEST FOR EXPERIMENTAL AUTHORIZATION

AeroVironment, Inc. (AV) designs, develops, manufactures, supports and operates unmanned aircraft systems (“UAS”). By this application, AV requests that the Commission grant an experimental license to operate facilities within the 5140-5150 MHz segment at:

- Spaceport America, Truth of Consequences, Sierra County, NM, North 32° 59’ 31” West 106° 58’ 17”

The operations at Spaceport, NM, with a radius of 100 km (58 miles) of center, will reach an altitude of 25.9 km AGL (85,000 feet).

Further Testing of Sun glider High Altitude Platform

The tests continue AV’s High Altitude Platform System (HAPS) project for unmanned aircraft. The project is a solar-powered high-altitude long-endurance unmanned aircraft. The further development work and testing pursue improvements to the aircraft.

During the test flight on September 21, 2020 and concluding on September 22, 2020, the AV team piloted the Sun glider aircraft to a stratospheric altitude of 62,500 feet above Spaceport America in New Mexico. Sun glider achieved major test objectives relating to propulsion, power systems, flight control, navigation and datalink integrity, and structural performance during the most turbulent phases of the flight as it entered and exited the jet stream.

The ongoing work represents the next-generation Sun glider solar aircraft and involves building a third aircraft, performing additional flight testing and demonstrating longer-duration capacity. Improvement objectives, based on learnings revealed from the previous flights, are being pursued.

The Commission authorized experimental license WK2XYP, 0323-EX-CN-2020, in support of the September 2020 flights access to the 5140-5150 MHz. It has also authorized experimental license, WL2XGB, 0758-EX-CN 2020, in support of laboratory testing of the 5140-5150 MHz band at AV Simi Valley, CA and Moorpark, CA laboratories.

Coordination with the Federal Aviation Administration

A coordination request was submitted to the Federal Aviation Administration (FAA) as to 5140-5150 MHz. The coordination of FAA Spectrum Engineering is provided as separate attachments. AeroVironment will adhere to the FAA conditions.

Coordination with the Aerospace and Flight Test Coordination Council

A coordination request was submitted to the Aerospace and Flight Test Coordination Council (AFTRCC) as to 5140-5150 MHz. The AFTRCC coordination document is provided as a separate attachment. AeroVironment will adhere to the AFTRCC conditions.

Nature of Operations

AeroVironment anticipates that the testing will take place over several months on an intermittent basis. Proposed operations encompass a radius of 100 km (58 miles) of center reaching an altitude of 25.9 km AGL (85,000 feet). Test will be intermittent and conducted over a period of two years.

AV's request is solely to flight test a prototype aircraft on an intermittent basis for a short period. It does not encompass ongoing commercial operations. AeroVironment understands that use of the frequencies is only for purposes of testing radio equipment in the spectrum band segment proposed.

Stop Buzzer

Bart Decker, Flight Standards Manager, is available at Mobile Phone Number (805) 391-1335 and email, Decker@avinc.com, and will act as a "stop buzzer" if any matters involving interference arise during the testing.

Transmitting Equipment and Antenna

The Quansonix QSX-VDR2-1100-05-04-05AB-LD-VP will use the 5140-5150 MHz segment only for one-way air to ground telemetry during the flight tests.

Antenna details are provided in a separate attachment.

Restrictions on Operations and Interference Protection

AeroVironment commits to operations respecting other users of the band and those in adjacent segments. AeroVironment understands that experimental operations must not cause harmful interference to authorized facilities. Should any interference occur, AeroVironment will take immediate steps to resolve the interference, including, if necessary, discontinuing operations.

Waiver of Station Identification Requirement

AeroVironment asks for a waiver of the station identification requirements stated in Section 5.115 of the Commission's rules.

Diagram

A diagram of the operations is provided as a separate attachment. A photograph of the 2020 Sunlider aircraft is also provided.

Conclusion

AeroVironment appreciates the consideration of the Commission, NTIA, FAA, DoD and other agencies reviewing this application. Please call upon us if we can respond to any questions.