

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 in the 5140-5150 MHz at:

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

AeroVironment proposes operations with a radius of 100 km (58 miles) of center reaching an altitude of 25.9 km AGL (85,000 feet).

These tests support AeroVironment’s Hawk30 High Altitude Platform System (HAPS) for unmanned aircraft. The project is a solar-powered high-altitude long-endurance (HALE) unmanned aircraft. The tests address integrating the transceivers at different altitudes in the solar environment.

The second successful test flight of the HAWK30 solar-powered HAPS took place on October 23, 2019 at the NASA Armstrong Flight Research Center, Edwards Air Force Base (EAFB) CA. The test flight reached altitudes higher than those of the previous flight and was conducted continuously for approximately one hour and 30 minutes. The HAWK30 successfully achieved more than two dozen test points, including 180-degree turns and further validation of avionics, power and propulsion performance. The test team simulated precise landing control on the runway, like its commercial operations concept.

The Commission authorized the EAFB tests under experimental licenses WJ2XUP (454.7-454.975 MHz/459.7-975 and 5040.8825 MHz) and WK2XFQ (5140-5150 MHz).

This application and experimental license application, # 0240-EX-CN-2020, present the request for authority to conduct further and higher altitude flights at Spaceport America, New Mexico.

The following summarizes the further testing proposed, the reasons underlying the effort and the technical parameters of the intended operations.

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 one year.

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 by telephone at Mobile Phone Number (805) 391-1335 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.

Conclusion

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