

STATEMENT ACCOMPANYING REQUEST FOR SPECIAL TEMPORARY AUTHORITY EXPERIMENTAL AUTHORIZATION BY AEROVIRONMENT, INC.

1. Introduction

By this application, AeroVironment, Inc. (AeroVironment), requests that the Commission grant Special Temporary Authority for a 30 days period to operate facilities at frequency 1377.5 MHz at Edwards Air Force Base, Kern County, California. The experiments will be conducted on an intermittent basis for a 30 day duration, subject to the coordination and control of Edwards AFB Spectrum Management and Edwards AFB Operational Units. AeroVironment will comport with all processes and procedures.

The experiments are to support a US Army Security Assistance Command's (USASAC) project involving the use of 1377.5 MHz for SUAS downlink video and telemetry transmission relating to the Government of Uzbekistan.

This application, although new, revises a previous request for authority. In File No. 0155-Ex-ST-2015, which dismissed the request without prejudice, the Commission advised that NTIA recommended pursuing frequencies above 1370 MHz and to coordinate with the Federal Aviation Administration (FAA). This application comports with this recommendation and includes coordination with the FAA, which is attached.

In this statement, we explain the purpose and nature of the proposed operations and why this application is within the Commission's experimental authorization rules. We provide the information required by the Commission's rules. We also ask for Expedited Consideration.

2. Request for Expedited Consideration

AeroVironment faces scheduling challenges at Edwards AFB in the context of providing support via the proposed experiments relating to the USASAC project. The cooperation, review and assistance by Edwards Spectrum Management and Operations, the FAA, NTIA and FCC have been critical to moving this request forward. Yet, we did not anticipate several factors, including the time to pursue coordination prior, and ask for consideration so that we are able to accommodate the circumstances.

3. Purpose

The purpose of the experiments is to provide analysis and information relating to the provision of small unmanned aircraft system (SUAS) technologies in support of USASAC's responsibility to manage security assistance programs and Foreign Military Sales. As noted, the analysis and information is directed to a USASAC project involving the Government of Uzbekistan. AeroVironment has a contractual relationship with the US Army and other US military services.

The experimental authorization will be used to demonstrate that the video-telemetry technology can make a meaningful contribution to security and emergency response requirements at significant cost efficiencies. The experimental work will make possible the provisioning of the technology in an expeditious manner.

4. Technology Use

AeroVironment SUAS technology provides real-time direct situational awareness. The system's communications platform features air vehicles (SUAS), a ground control unit and support equipment. The AV can be controlled manually or can autonomously navigate a preplanned route. AeroVironment's SUAS technology is directed to assist national security and emergency response responsibilities. The experiments embrace a model using a spectrum segment available to and authorized for the user agency. The requested band segment aligns with technology and equipment currently available.

AeroVironment commits to operations respecting other users of the band and those in adjacent segments. The limited power levels proposed and the short term intermittent use are part of this commitment. The project supports the US Army Security Assistance Command and serves the public interest.

The frequency located at 1377.5 MHz will be for purposes of SUAS control and video and telemetry transmission from the SUAS to the ground.

The proposed location is within Department of Defense Restricted Air Space operations at Edwards Air Force Base, Kern County, California, with a radius of 30 km of the center point, not to exceed 305 meters AGL.

5. Purpose and Nature of Operation

Airborne Transmission

The segments 1377.5 MHz will send command and control data from the SUAS and transmit NTSC video and telemetry to the ground control station with FSK modulation. Emission Designator 14M8F9W with a transmit power at 1.5 W is proposed. Transmission control will be from the ground control station to the SUAS via a laptop or consul. The SUAS will not exceed 305 meters AGL.

6. Stop Buzzer

Andy Thurling, Chief Test Pilot and Director, Product Safety and Mission Assurance, AeroVironment, will be available by telephone at 805.581.2198, extension 1892 or mobile phone 805.368.6351, and will act as a "stop buzzer" if any matters involving interference arise during the testing.

7. Transmitting Equipment

Manufacturer	Model	Quantity	Experimental
L3 Communications	VNTXL-2A/SC232	2	No

8. Antenna

The following details Antenna information:

Antenna Frequency Segment	Gain (Main Beam)	Polarization	Orientation in Vertical Plane	Orientation in Horizontal Plane
1377.5 MHz AeroVironment PN 55018	2.2 dbi	Vertical	78 deg	360 deg

9. Restrictions on Operations and Interference Protection

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, arranging for the discontinuance of operations.

10. Waiver of Station Identification Requirements

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

11. Diagram

A diagram of the proposed operations follows.

Conclusion

AeroVironment appreciates very much the Commission's, the NTIA, FAA and other agencies' consideration of its application and the cooperation of concurring agencies for an Experimental Authorization. Please call upon us if we can respond to any questions.

Operations Diagram



Small Unmanned Aircraft-

Command and
Control Data
Video and
Telemetry
1377.5 MHz



Coordination by the Federal Aviation Administration

Tue 3/17/2015 3:50 PM

From: Kevin.Yazawa@faa.gov

To: johnelogan@jelogan.com

cc: Thomas.Ahn@faa.gov; Sydney.Bradfield@faa.gov; james.motley@faa.gov

Re: UPDATE: Authorization Information for Test at Edwards AFB.

Mr. Logan: Your Coordination Request for emitting on freq 1377.5 MHz at Edwards AFB has been completed ~ and the record is now pending in HQ (NG T 150084 in "HN"). You should be hearing back from someone very soon. Have a good one, and please do feel free to contact me directly if you have any further comments, questions, or concerns.

Kevin T. Yazawa

Frequency Management Officer

WSA Spectrum Engineering

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Edwards AFB, CA 93523

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From: John E. Logan [johnelogan@jelogan.com]

Sent: Tuesday, March 17, 2015 4:09 PM

To: Yazawa, Kevin (FAA)

Subject: RE: Authorization Information for Test at Edwards AFB.

Hello KTY-

Sure. The first document is the Attachment to the FCC Application. The second document is the template of the FCC Form 442, which should contain what I think was in the email. Note that it is only 2 pages long and the formatting never aligns well as it is pulled from the FCC electronic application.

Thanks for your work and the courtesy you and your colleagues have extended to us. Let me know any comments/questions.

john