

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 in continued support of 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, replicates previous authority, which has now expired. In File No. 0322-EX-ST-2015, the Commission granted authority, WI9XKH, for a period commencing March 30 and terminating May 1, 2015. We have coordinated this new request with the Federal Aviation Administration (FAA); its statement is attached. AeroVironment renews its commitment to comport with the FAA's directions and policies.

The reason underlying this application is that the Government of Uzbekistan, after completing the April 2015 testing, has expanded its requirements. All the technical, location and height metrics will remain the same. The purpose of the proposed tests will to discern the SUAS technology's performance under the updated requisites.

In this statement, we review 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 asks the understanding of the Commission, NTIA, FAA and that of other agencies. We recently learned of this request for further testing. As we have related previously, we face scheduling challenges at Edwards AFB. The cooperation, review and assistance by Edwards Spectrum Management and Operations, the FAA, NTIA and FCC were critical in the previous experiments. We did not anticipate the additional requirement 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. The analysis and information is directed to a USASAC project involving the Government of Uzbekistan. AeroVironment has contractual relationships with the US Army and other US military services.

The experimental authorization will be used to demonstrate the video-telemetry technology and how it contributes to security and emergency response requirements at significant cost efficiencies. The experimental work will make possible the provisioning the revised requirements 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 segment 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, DoD 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

John E. Logan

From: Kevin.Yazawa@faa.gov
Sent: Friday, August 21, 2015 4:39 PM
To: johnelogan@jelogan.com
Cc: Sydney.Bradfield@faa.gov; james.motley@faa.gov
Subject: RE: FW: FCC Experimental Application- 1377.5 MHz- AeroVironment

Importance: High

Mr. Logan... I was tied up with an issue in AZ, and asked one of our senior FMOs: Sydney Bradfield to do me a favor and extend your temporary experimental authorization request. He replied back very soon after that it's been completed, and the Record is now in the queue at HQ ~ you should be good to go very shortly ~for another 30 days.

Kevin T. Yazawa
Frequency Management Officer
WSA Spectrum Engineering Group (AJW-1C7)
100 Sparks Dr.
Edwards AFB, CA 93523

From: John Logan [mailto:johnelogan@jelogan.com]
Sent: Monday, August 17, 2015 3:49 PM
To: Yazawa, Kevin (FAA); John Logan
Subject: Fwd: FW: FCC Experimental Application- 1377.5 MHz- AeroVironment

Hello Mr. Yazawa-

Checking back to see if you have you had a chance to review AeroVironment's request for a brief extension for an STA to use 1377.5 MHz? We don't mean to intrude, we are getting some challenge from the Uzbekistan agency in seeking to schedule the tests.

Many thanks. john

John E. Logan 1717 K Street, NW Number 900 Washington, DC. 20006 USA 202.787.5621 (office) 202.494.6714 (mobile) 202.318.4257 (fax)

From: Kevin.Yazawa@faa.gov [<mailto:Kevin.Yazawa@faa.gov>]
Sent: Thursday, August 06, 2015 9:38 AM
To: johnelogan@jelogan.com
Cc: Thomas.Ahn@faa.gov; Sydney.Bradfield@faa.gov; james.motley@faa.gov
Subject: RE: FCC Experimental Application- 1377.5 MHz- AeroVironment

Mr. Logan: Let me see what we can do for you. Since it can be noted that there weren't any issues what-so-ever with the original temporary assignment ~ I imagine there shouldn't be any issue with re-issuing it again. More to follow.

Kevin T. Yazawa

Frequency Management Officer

WSA Spectrum Engineering Group (AJW-1C7)

100 Sparks Dr.

Edwards AFB, CA 93523

From: John E. Logan [<mailto:johnelogan@jelogan.com>]
Sent: Tuesday, August 04, 2015 2:20 PM
To: Yazawa, Kevin (FAA)
Cc: Ahn, Thomas (FAA); Bradfield, Sydney (FAA); Motley, James (FAA)
Subject: FCC Experimental Application- 1377.5 MHz- AeroVironment

Hello Mr. Yazawa-

Recall that last March you reviewed/coordinated an FCC experimental special temporary authority application for us to use 1377.5 MHz at Edwards AFB for purposes of a USASAC project with the Government of Uzbekistan. The testing was completed in April as scheduled.

We at AeroVironment were advised this week that Uzbekistan seeks to expand the project's requirements, which i think means purchasing additional units, contingent on further testing. Would you accept this note as a request to review the new application, as the current authority

has expired? All technical and other matters remain and are replicated, including the length of the STA- 30 days. The draft application and explanation are attached.

We appreciate very much your consideration; we know you and your colleagues have a range of responsibilities of which coordination is only a small part and do not mean to burden you.

Let me know any questions. Thanks very much.

john

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