

Application for Special Temporary Authority

Courtney Aviation

File No. 1129-EX-ST-2017

August 9, 2017

Narrative Explanation of Operation and Frequency Coordination Exhibit

This is an application for Special Temporary Authority on behalf of Courtney Aviation, an FAA-approved Part 135 Air Taxi Carrier that operates under contract with the United States Forest Service in support of wildland firefighting in the Western United States, and specifically in the States of California, Oregon, Washington, Arizona, Nevada, Utah, Montana, Idaho, Wyoming, Colorado and New Mexico. The Commission has once before granted an identical STA request to this applicant in 2016. See 0672-EX-ST-2016, WJ9XUW.

An application identical to this one, 0642-EX-ST-2017, was filed on May 16, 2017 but was dismissed without prejudice by letter of the Chief, Experimental Licensing Branch. The application should not have been dismissed or submitted to NTIA because it specified no Federal spectrum. This application similarly specifies use only of the 2395-2450 MHz band, as did WJ9XUW. Nevertheless, the applicant asserts that all operations pursuant to WJ9XUW were coordinated with NIFC and wildland fire regional management. It is noted that this operation is pursuant to a contract with the USFS.

Courtney Aviation has developed a plan for enhanced air response and aerial reconnaissance during the attack phase of wildland firefighting using aircraft in the Western part of the United States. Courtney Aviation acts as the air tactical group supervisor above the fire and in coordinates the response. Part of this response plan involves aircraft conducting aerial reconnaissance using onboard cameras of various types to gather information about the fire. The video from those cameras is downlinked to the ground using an onboard transceiver, either directly to a ground receive station or via linked, portable mountaintop repeaters (in cases where line-of-sight between the aircraft and the ground station command post receiving the video is potentially shielded by terrain in a given area).

The main transmitters and amplifiers and repeaters proposed for testing of this system are capable of operating between 2390 MHz and 2450 MHz. The Transceiver is a Mesh network TCP/IP Multi-in, Multi-out (MIMO) transceiver. The bandwidth is variable, at 5, 10, and 20 MHz. Onboard aircraft amplifiers have a maximum output of 12 watts. Antennas are omnidirectional aboard the aircraft at 10 dBi gain, but the ground repeaters might use Flat Plate antennas at 12-16 dBi gain.

Maximum transmission distance is anticipated to be 40 miles. The proposed mobile downlinking of broadband video will occur typically in rural or exurban areas and is unlikely to be interfered with by, or to interfere with, any other uses in the segment 2390-2450 MHz. All of the proposed operation will be fully coordinated during the test period in the Amateur Radio Service. It is not anticipated, due to the geographic area of deployment of this system that there

will be any interference to or from terrestrial Amateur Radio operation and there should be no interference from unlicensed RF devices on the ground.

The “stop buzzer” contact for this operation will be Mr. Randy Voorhees, the Downlink Program Manager at Courtney Aviation. His mobile number is 209-694-9656. All other communications can be addressed to the office of counsel for the applicant as follows:

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