

## FCC License Exhibit 2

From: Harold Prosser

To:

Date: March 7, 2019

Subject: FCC File No. 0156-EX-CN-2019

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Message:

1. Please select the frequency bands that you intend to use during your testing and remove the ones you don't need.

Kratos Response:

1575.42 MHz – GPS Re-Radiation Kit for use within the factory under a metallic roof. System functional test will require the navigation system to acquire the GPS satellites. The facility blocks GPS signals due to a metallic roof structure. The re-radiation kit is necessary for the validation process. In addition multiple aircraft will be in test and this will allow them all to have access to satellite data.

1030 MHz – This frequency will be used to interrogate the onboard IFF system of the aircraft. It will be used in a factory test configuration when validating the aircraft prior to delivery.

1090 MHz – Integration, test and operational verification of the aircraft IFF systems is required prior to field operation.

2200-2300 MHz – This frequency band is used for video downlink of flight operations during use. Authorization for the frequency is to allow test and integration of the system as part of the final assembly and check out of the aircraft.

3245 MHz – This frequency is used by the aircraft to detect objects in proximity to the vehicle during flight. These objects (typically missiles or equivalent) are detected as a method of scoring for when the aircraft is used as a target for missile defense training. The use of this frequency will be limited to test and integration in the factory as part of the acceptance test process for the aircraft prior to delivery.

4300 MHz – This frequency is the operational frequency of the installed radar altimeter system for the aircraft, which provides a second source of altitude information to the navigation system. Use of this frequency will be in a test and integration mode during production test of the aircraft.

430-450 MHz - These frequencies are for the aircraft's command and control system.

978 MHz – ADS-B system is integrated and tested on the aircraft.

2. In great details, please explain the purpose of your testing and furthermore using a UAV.

Kratos Response:

The testing is for the aircraft checkout before a flight test that will take place at a designated test flight facility/range. Part of the aircraft checkout requires verification of the command and control systems, navigation systems, and telemetry systems, which operate on the frequencies listed above.

For the command and control system it will operate at only one channel but Kratos would like to verify a few channels to make sure there are will be no issues with the system during flight test. Kratos decided that we can minimize the amount of frequencies to three (low, mid and high end of the operating band).

For the Flight Termination system, it operates from 420 to 430 MHz band but we will only operate at one channel frequency. We requested three channels because those are the channels the UAV may operate at during flight test at the AFRL test location.

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For the telemetry system it can operate from 2200 to 2400 MHz. Kratos selected three channels that the UAV may be utilized during flight test.

The main purpose of the aircraft checkout is to mitigate any risk of communication issues/interference when this aircraft conducts its flight operations. It allows for troubleshooting the communication systems in a controlled laboratory environment at the Kratos test/production facility.

3. What are the coordinates (latitude (DD-MM-SS) and longitude (DD-MM-SS)), the maximum height and radius of operation of the UAV?

Kratos Response:

The coordinates for the location are Oklahoma City, Oklahoma - NL 35-26-13.56; WL 97-38-51.46. The maximum height of the test operation should no greater than 15 feet (~5 meters). The operation radius will be less than one kilometer from the coordinate location.