

Special Temporary Authority to Test Radar Instrumentation

A. Purpose of Operation and Need for License

The purpose of this application is to request authorization from the FCC for CRE SIS (Center for Remote Sensing of Ice Sheets) at the University of Kansas to operate a UAV (Unmanned Aerial Vehicle) radar systems during test flights (1-4 hours each flight) between November 20, 2017 and January 30, 2018, near the Perry Lake area in Oskaloosa, Kansas. We are integrating our miniaturized 2-18 GHz radar on to Pulse Aerospace's Vapor 55 Helicopter UAV (<http://www.pulseaero.com/uas-products/vapor-55>). We plan to fly small grids in the area indicated to demonstrate soil moisture measurements from an unmanned platform. Property to be flown is private property owned by the operator of the UAV. This application is a revised request. The original request was 0181-EX-ST-2017. The request has been updated with reduced operating power

B. Locations of Proposed Operation

The STA is requested to allow the collection of data using UAV-mounted radar and for the calibration and testing of the radar. The height of the transmitter will be a nominal flight altitude of no higher than 500 feet AGL. The locations of operation are outlined in Table 1.

Table 1 – Summary of Proposed Operation Locations

Proposed Location	Notes
Perry Lake Area – Oskaloosa Kansas Lat.: 39.1489 long: -95.4257	Within a 1 km radius of the described coordinates

