The Boeing Company
Request for Experimental License Exhibit

Independent Research and Development

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by

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Why an Experimental License is necessary

The Boeing Company requests an experimental license in order to test various components used in research and development of unmanned aircraft systems (UAS).

Purpose of Operation

The purpose of the experimental license is to test radio frequency (RF) components that will be integrated into the UAS. These components include a command and control uplink and downlink system used to control the UAS; a video telemetry system that will allow a ground station to view a video stream from the UAS; and a telemetry system that will provide measurements from the UAS.

Test Description

The video telemetry system will be operated at a remote test site in Sherman, Texas. The configuration includes a ground station and a small UAS. The ground station transmits command and control uplink signals to the UAS and receives telemetry and video data from the UAS. The UAS transmits command and control downlink data, telemetry and video data to the ground station. There will be no actual flight testing during this test.

Timely Response Appreciated

Boeing will greatly appreciate a determination as quickly as possible to meet the directive schedule.

Location

Sherman (Grayson County), TX
33° 33' 27"N
96° 36' 58"W
WGS84/NAD83

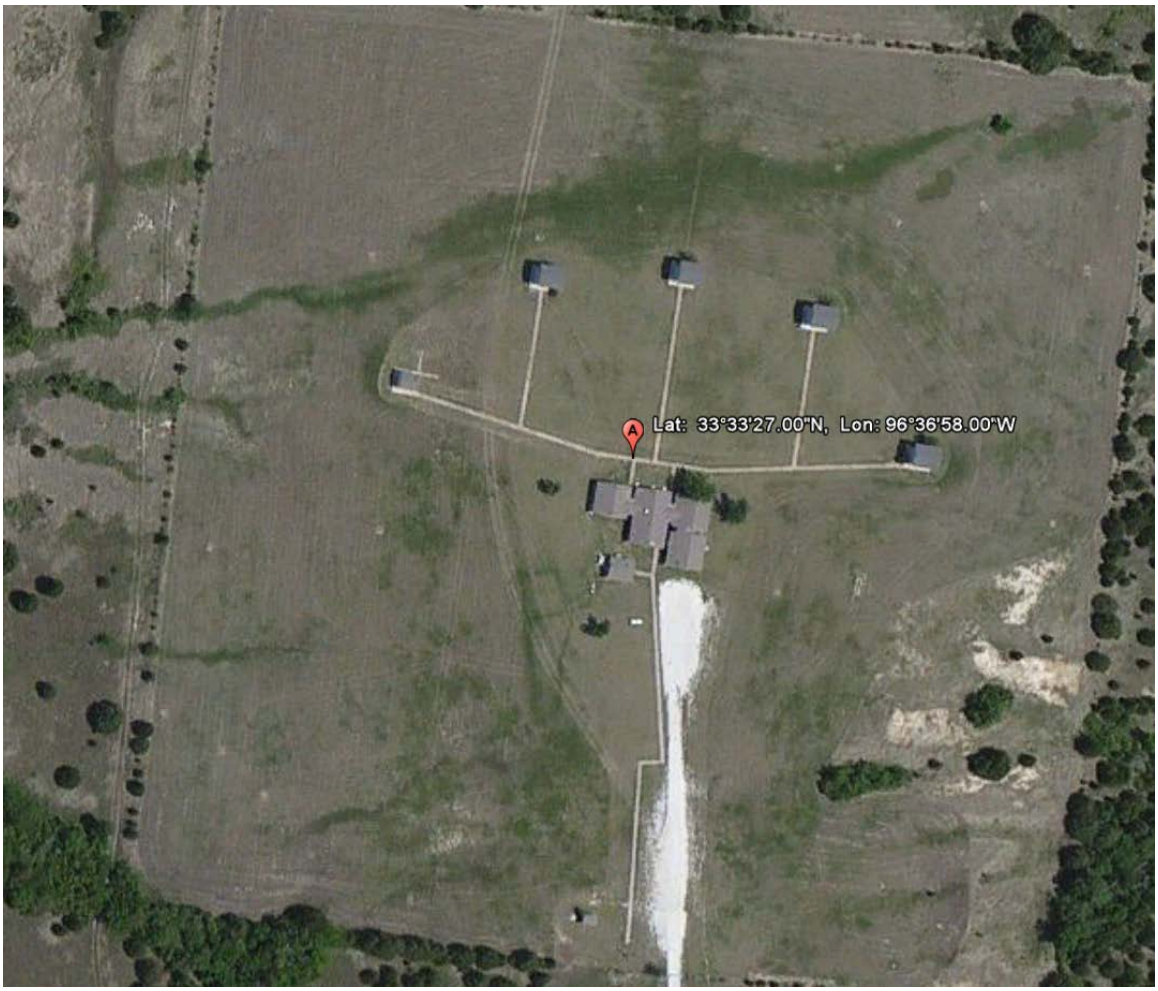

Figure A – Sherman, Texas Test Site

Schedule

The requested OET license is to be effective for 2-years upon a grant from the FCC/OET. Operations will be anytime, 24 hours a day, 7 days a week, within a 2 kilometer radius of given location as necessary.

Stop Buzzer Contact Information

The equipment will be operated by Boeing employees.

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Frequencies, Power and Emission

Purpose	Frequency (MHz)	Emission Designator	Peak Power (ERP)
Command & Control Downlink	902-928	230KF1D	1 Watt
Command & Control Uplink	902-928	230KF1D	1 Watt
Telemetry	2205.5	4M00F7D	2 Watts
Telemetry	2216.5	4M00F7D	2 Watts
Telemetry	2239.5	4M00F7D	2 Watts
Telemetry	2268.5	4M00F7D	2 Watts
Telemetry	2282.5	4M00F7D	2 Watts
Video Downlink	2410.75	16M0F3F	2 Watts
Video Downlink	2433.75	16M0F3F	2 Watts
Video Downlink	2452.75	16M0F3F	2 Watts
Video Downlink	2462.75	16M0F3F	2 Watts
Video Downlink	2472.75	16M0F3F	2 Watts
Video Downlink	2486.00	16M0F3F	2 Watts
Video Downlink	2490.00	16M0F3F	2 Watts
Video Downlink	2495.00	16M0F3F	2 Watts

Equipment and Antenna Parameters

Purpose	Manufacturer	Model	Antenna Type	Antenna Gain	Antenna Polarization
Command & Control	Freewave	FGRM-501X005	Monopole	0	Vertical
Telemetry	Teletronics	TTS-6232	Monopole	0	Vertical
Video	Global Microwave Systems Inc./ Cobham	NT Series	Monopole	0	Vertical

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