Submitted by Joel Thorsheim on behalf of Insitu
The Boeing Company
Global Spectrum Management
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Seattle, WA 98124-2207
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Purpose
The purpose of this Special Temporary Authorization (STA) application is to support temporary UAS Command and Control (C2) testing and development of a C-Band C2 link.

Operation Description
The ground control station (GCS) will provide the Command and Control uplink to the UAS and the UAS downlink in the same frequency band.

Command and Control Uplink from Ground Station to UAS

Frequency Band:	4400 - 4800 MHz
Emission:	230KF1D
Maximum Output Power:	104,000 Watts ERP
Manufacturer:	Freewave Technologies
Transmit Output:	1 Watt with 5 or 10 Watt Amplifiers (Peak)
Antenna Type and Gain:	1.2 Meter Parabolic Reflector, 32.3 dBi
Antenna Type and Gain:	Omni, 6 dBi

Mobile Command and Control Downlink from UAS to Ground Station

Frequency Band:	4400 - 4800 MHz
Emission:	230KF1D
Maximum Output Power:	10 Watts ERP
Manufacturer:	Freewave Technologies
Transmit Output:	1 Watt with 5 or 10 Watt Amplifiers (Peak)
Antenna Gain:	2 dBi
Antenna Type:	Dipole Omni Antenna

City	State	Latitude	Longitude	Radius (KM)	Station Type
Pendleton UAS Test Range	OR	45-41-21 N	118-50-32 W	50	Mobile/Airborne 15,000 Feet Altitude

Stop Buzzer for this operation is Insitu Operations Action Center at 866-637-4691.

Dates of Operation:
Start Date: 1 June 2021
Stop Date: 30 November 2021