

Technical Description

Submitted by Joel Thorsheim on behalf of Insitu
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Frequency Management Services
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Purpose

The purpose of this Special Temporary Authorization (STA) request is to support emergency operations as requested by the Washington State Department of Natural Resources (DNR).

Description

The UAS will takeoff from the airport and proceed to the operational area. The ground control station will be located at the airport and the UAS will be operating in the operational area under an emergency certificate of waiver or authorization (ECOA). See attached correspondence from Department of Natural Resources (DNR).

Dates of Operation

Start Date: 7/18/2014
Stop Date: 9/18/2014

Equipment and Frequency Requirements

Command and Control Uplink from Ground Station to UAS

Frequency Band: 902-928 MHz
Channels/Spacing: Frequency hopping; 50 to 112 center frequencies, user selectable, 112 channels in 230.4 KHz increments starting with 902.2464 MHz
Emission: 230KF1D
Transmit Output: 1 Watt
Output Power: 61 Watts ERP
Manufacturer: Freewave Technologies
Model: FGRM-501X005
Antenna Gain: 20 dB
Antenna Type: 1.8 Meter Parabolic Reflector
Ant. Vert. Beamwidth: 15 degrees
Ant. Horz. Beamwidth: 15 degrees

Mobile Command and Control Downlink from UAS to Ground Station

Frequency Band: 902-928 MHz.
Channel Spacing: Frequency hopping; 50 to 112 center frequencies, user selectable, 112 channels in 230.4 KHz increments starting with 902.2464 MHz
Emissions: 230KF1D
Transmit Output: 1 Watt
Output Power: 1 Watt ERP
Manufacturer: Freewave Technologies
Model: FGRM-501X005
Antenna Gain: 0 dB
Antenna Type: Center-Fed Half-Wave Dipole (Vertical)

Mobile Video Downlink from UAS to Ground Station

Frequencies: 2411, 2434, 2453, 2463, 2473, and 2486 MHz
Emissions: 18M0F9W and 16M0F3F
Transmit Output: 2 Watts
Output Power: 1.22 Watt ERP
Manufacturer/Model: L-3 Southern California Microwave/VNTX Series

Manufacturer/Model: Global Microwave Systems/NT series
Antenna Gain: 0 dB
Antenna Type: Dipole

Stop Buzzer

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

Airport Location

Twisp, Washington

NL 48-21-02; WL 120-05-38

Radius of Operation: 8 Kilometers around airport

Maximum Flight Level: 8,000 Feet

Operation Area

Carlton, Washington

NL 48-13-01; WL 120-03-00

Radius of Operation: 12 Kilometers

Maximum Flight Level: 8,000 Feet

