

Response to STA Form – Purpose of Operation

Altaeros testing involves placing a fixed, tethered aerostat at an altitude of 150 meters AGL and testing transmitting with two different Ericsson LTE base stations and two different antennas. The FAA has approved the Altaeros moored aerostat operation at the Loring Maine International Airport through December 30, 2017. See attached Certificate of Waiver or Authorization dated June 20, 2017. The waiver, under FAA regulation 14 C.F.R. Part 101.1 Subpart B, permits the aerostat to operate at 700 feet above the earth's surface (213m AGL) at the Loring International Airport. The FAA must be contacted one hour before operation and again on completion. Operations are approved for day and night. Consent for temporarily using the 1950 - 1965MHz spectrum has been obtained from the license holder. The Canadian border is 6.8km from the transmitting location, and transmission will be maintained at power levels that will not allow it to cross the border. Altaeros will constantly monitor RF spectrum at the border to ensure that transmission does not cross the border. In the event that inadvertent transmissions exceed 6.8km radius, power levels will immediately be reduced. Even if inadvertent transmissions exceed 6.8km, the likelihood of interference is low as Altaeros conducted a 60km RF spectrum survey around the Loring Airport transmitter location for the authorized spectrum and for adjacent spectrum and no spectrum use was observed. The test will be configured to prevent any uncontrolled transmission. A "stop button" for the transmitters will always be available in the event of an interference issue. During all transmission testing full control of the transmitters will be maintained by Altaeros personnel on the ground. The LTE base station will transmit to LTE handsets. Altaeros will gather information from the test transmissions at various heights at or below the authorized height and in various environments and locations around the transmitter.

Altaeros will use the following two radios and antenna combinations:

- 1) A CommScope CMAX-OMH-CPUSEi53 antenna connected to an Ericsson 2203 LTE base station.
- 2) An array of four ZDA ZDAFP0727-07XP antennas connected to the Ericsson 6402 LTE base station.

A diagram of the Altaeros tethered aerostat system is below.

