



Exhibit A

Application for Ku band Mobile Antenna License

By this application, Viasat, Inc. ("Viasat") seeks a license for broadband connectivity for transportable antenna models mounted on ground vehicles.

1. Network

The Kymeta KyWay™ u7 Ku-band antenna and Kymeta™ u8 antenna will operate in the same Viasat ArcLight Ku-band network, using the same frequencies and access method, as terminals authorized under call sign E050318. The ArcLight network supports two types of user links, code reuse multiple access (CRMA), a Viasat proprietary CDMA-like access method, and single channel per carrier (SCPC). The multiple access channel is described in complete detail in the attachments listed in the original application (SES-LIC-20051028-01494). The network allows the terminal to move locations within the service area and seamlessly switch from beam to beam within the current operational satellite and to switch between satellites, as coverage and traffic demands dictate.

The SCPC channel employs adaptive coding and modulation allowing the terminals to transmit at any code and modulation point within the library of available choices that the link supports. The available symbol rates are 6 mega-symbols per second, or megabaud (MBd), 12 MBd and 18 MBd.

The ArcLight architecture is designed to operate at the lowest power density modulation and code point that allows the link to close. The network employs adaptive power control and reduces power when conditions permit, keeping the Es/No margin at 1 dB or less above the intended operating point.

2. Request to Operate Mobile/Transportable Earth Station

Viasat requests to operate the Kymeta KyWay™ u7¹ Ku-band satellite terminals currently authorized for use in the general public under call sign E170070. The antenna is a 32.4 in. x 32.4 in. flat-panel, electronically scanned array. Viasat also requests to operate the Kymeta™ u8 terminals. The antenna is a 35.5 in. x 35.5 in. flat panel electronically scanned array.

¹ See File No. SES-LIC-20170223-00195, Call Sign E170070

The terminals have electronic steering for low maintenance and reliable connectivity. The terminals will be a Viasat modem paired with the Kymeta antenna mounted on a ground vehicle. Viasat will provide broadband internet connectivity for the vehicle, both in motion and at temporary-fixed locations, via the terminal described.

All antennas will be operated under the control of the NCMC and will comply with the requirements of Section 25.228 governing the operation of earth stations in motion ("ESIMs"). Each individual antenna terminal is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the transmitter exceeds the relevant off-axis EIRP density limits.

The U.S. point of contact available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESIMs is:

349 Inverness Drive South
Englewood, CO 80112
Tel: 720-493-7300

The terminals fully comply with the Section 25.218(f) off-axis EIRP density envelopes for FSS earth stations transmitting in the 14.0-14.5 GHz band, as illustrated by the antenna patterns included as Exhibit B.

The terminals comply with the limits in Section 25.218(f)(1) for co-polarized transmissions in the plane tangent to the plane of in the GSO arc. According to Exhibit B, there are no exceedances for angles below 7° and less than 10% of co-polarization sidelobes exceed the peak EIRP density limits for angles above 7°. The maximum exceedance is less than 3 dB except in the area of the main spillover region of the reflector where the cross-polarized component has a maximum exceedance of less than 6dB. Therefore, the antennas are compliant.

According to Section 25.218(f)(2) for co-polarized transmissions in the plane perpendicular to the GEO arc, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 6 dB. As demonstrated in Exhibit B and Exhibit C, there are not exceedances greater than 6 dB and all exceedances are within the 10% limit. Thus, the antennas comply with this requirement as well.

3. Satellite Points of Communication and Geographic Service Area

With this application, Viasat seeks to include the following satellites as points of communication for the KyWay antennas, and authority to operate within the coverage area of each satellite, including within all of the United States and its territories. All satellites are authorized by the Commission.

- i. SES-2 at 87°W – Mexico, Central America, South America, Caribbean

- ii. SES-10 at 66.9°W – Mexico, Central America, South America, Caribbean
- iii. AMC-21 at 124.9°W – OCONUS
- iv. TELSTAR 11N at 37.5°W – North America, Europe, and Africa
- v. INTELSAT-19 at 166°E – CONUS, Asia-Pacific, Australia, New Zealand
- vi. HORIZON 1 at 127°W – OCONUS and Mexico
- vii. INTELSAT-15 at 85.15°E – Asia, India