

ViaSat, Inc.  
Request for Special Temporary Authority  
File No. 0453-EX-PL-2010

## **ATTACHMENT**

### Why is a license necessary?

ViaSat requests an experimental license to perform acceptance testing on a mobile satellite communications system developed by ViaSat. As part of the test, the system will transmit signals in the 29.5-30.0 GHz range in order to demonstrate that the system is capable of transmitting in accordance with specifications.

ViaSat is currently testing from fixed or temporary fixed locations under experimental STA 0412-EX-ST-2010 (WE9XMT). ViaSat now wishes to begin testing mobile on-the-move operations using both ground vehicles and airborne platforms.

### Purpose of the Operation:

Approval of this license will allow ViaSat to perform testing of an RF Terminal (RFT), which will be a component in a mobile satellite communications system. The RFT is designed to enable communications via satellite to the designated satellite gateway earth station. The RFT is a 0.3 meter aeronautical mobile antenna, designed to provide communications via Ka-band satellites while on the ground or in flight.

The RFT consists of a tracking antenna, antenna feed assembly, power amplifier, and equipment for up/down conversion and modulation/demodulation. During testing, transmissions will be monitored by test engineers as well as the satellite operations center. If in the event interference is detected or for any other reason it is necessary to cease transmissions, ViaSat maintains a 7/24 Network Operations Center which can be reached at 1-888-272-7232.

During testing or demonstrations, the RFT may be mounted on a vehicular platform to test basic operations while on the move, and eventually on airborne platforms to test operation in flight.

During testing and demonstration the RFT will use one of several satellite systems for communications: AMC-16, AMC-15, WB-1, ANIK-F1, and eventually ViaSat-1 once it is launched in early 2011. All operations of the terminal over these satellites will be coordinated and monitored by their respective control centers.

The operation of the RFT will be in full compliance with the Commission's radio frequency (RF) exposure guidelines – see RF hazard analysis exhibit. The RFT will be secured from access by the general public and will be operated by experienced test personnel.