

## Exhibit A

### Description of Minor Modification Application

ViaSat, Inc. (“ViaSat”) seeks a minor modification to add a new antenna type to its blanket license, which currently authorizes the operation of 4,000,000 electrically identical earth station antennas to communicate with the ViaSat-1 satellite utilizing the 28.35-29.1 GHz and 29.5-30.0 GHz (uplink) bands and the 18.3-19.3 GHz and 19.7-20.2 GHz (downlink) bands (call sign E100143, file numbers: SES-LIC-20101217-01585 and SES-AMD-20110128-00074, referred to as “ViaSat-1 Blanket License”).

This minor modification to the ViaSat-1 Blanket License is being requested to add a second antenna type that is designed to the same electrical specification as the current antenna but from a second manufacturing source. The electrical characteristics of the new antenna are identical to the currently authorized antenna: the reflector dimensions are the same, the feed location is the same, and the actual feed and outdoor electronics are the exact same part used on the currently authorized antenna. Accordingly, as illustrated by the off-axis EIRP density plots attached hereto as Exhibit C, the radiated emissions are comparable to the currently authorized antenna and any minor differences fall within expected unit-to-unit tolerances. Just like the currently authorized antenna, the new antenna type meets the performance requirements in Section 25.138(a), and the power flux-density at the earth’s surface produced by the emissions from the satellite point of communication are within the -118dBW/m<sup>2</sup>/MHz limit set forth in Section 25.138(a)(6). In addition, the proposed earth station terminal conforms to the antenna performance standards in Section 25.209 in the receive frequency bands with a few minor exceptions, as demonstrated by the antenna gain patterns attached hereto as Exhibit B. Consistent with Section 25.209(c)(1) and Section 25.138(e), ViaSat does not seek additional protection from receive interference that is attributable to any shortfall in the receive antenna pattern performance.

Further, it is important to note that while the requested quantity for the new antenna type is 4,000,000, this represents the expected combined total quantity of terminals deployed under the ViaSat-1 Blanket License, not the individual installed count per antenna type (*i.e.*, 4,000,000 combined total, not 8,000,000).

In granting the ViaSat-1 Blanket License and the authorization for the ViaSat-1 satellite, the Commission granted authority to operate on the 28.6-29.1 GHz band on a secondary allocation and granted a waiver of the U.S. Table of Frequency Allocations to use the 18.8-19.3 GHz band for GSO FSS downlink operations.<sup>1</sup> In addition, the Commission permitted blanket licensing of earth stations in the 28.6-29.1 GHz and 18.8-19.3 GHz bands in the ViaSat-1 Blanket License. The new antenna type requested by this modification application will operate on these same frequencies when communicating with ViaSat-1, and thus, ViaSat requests the same waivers, to the extent necessary. The bases for such waiver showings for this new terminal type

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<sup>1</sup> See ViaSat-1 Blanket License; *see also* File Nos. SAT-LOA-20110722-00132, as amended (granted Oct. 14, 2011); SAT-LOI-20080107-00006, as amended (granted Aug. 18, 2009) (“ViaSat-1 Authorization”).

are no different than those already approved in the ViaSat-1 Authorization and the ViaSat-1 Blanket License. ViaSat respectfully incorporates by reference those prior showings,<sup>2</sup> and requests that the Commission permit operations and blanket licensing in the 18.8-19.3 GHz band in this case.

### **Radiation Hazard Analysis**

A radiation hazard analysis for the proposed antenna is attached hereto as Exhibit D. As demonstrated by the results of the analysis, the maximum permissible exposure limit (MPE) is met for protection of the General Population/Uncontrolled Exposures – 1 mW/cm<sup>2</sup> averaged over a thirty minute period. The automatic shut-down capabilities described in the analysis, coupled with the terminal's use of uplink power control and non-continuous operation, ensures that the general population will not be exposed to levels of electromagnetic radiation that exceed the Commission's limits.

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<sup>2</sup> See File Nos. SES-LIC-20101217-01585; SAT-AMD-20080623-00131.