

Exhibit A

Application to Modify License

I. DESCRIPTION OF AMENDMENT

ISAT US, Inc. (“ISAT US”), a subsidiary of Inmarsat Global Ltd. (“Inmarsat”), hereby seeks to modify its Global Xpress Ka-band land blanket earth station license, Call Sign E150097 (“License”), File No. SES-LIC-20150625-00383 (“GX Land Application”) (as modified by File No. SES-MFS-20160527-00458), to add two new GX Earth station terminal types (“QCT90 GX” and “CCT120 GX”) that will communicate with the Inmarsat-5 F2 (“I5F2”) and Inmarsat-5 F3 (“I5F3”) satellites. Section II addresses the proposed new Earth station terminals. No other changes are requested by this modification application. ISAT US incorporates by reference Exhibits F (response to Question E17 regarding the remote control point) and G (24-hour point of contact)¹ of the GX Land Application, as well as certain other portions of the GX Land Application referenced below.

II. NEW EARTH STATION TERMINAL

This modification application seeks to add the QCT90 GX and CCT120 GX model terminals that are manufactured by DataPath. The terminals will operate on the same frequencies as the GX Terminals in the current license: 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space). Both terminal models have asymmetrical antennas with off-set feeds resulting in effective apertures of 0.75m for the QCT90 GX and 1.0m for the CCT120 GX. The half-power beamwidth required in Section 25.130(f) is 1.5 degrees and 1.3 degrees for the QCT90 GX and CCT120 GX model terminals respectively. The terminals will operate at fixed or temporary fixed locations and allow organizations from sectors, including media, humanitarian, energy, and government to quickly deploy a communication network to meet mission needs.

The required technical data for the QCT90 GX and CCT120 GX Earth stations is provided in the Form 312. In addition, for blanket licensing of transmitting Earth stations in the

¹ Exhibit G was submitted as a supplement to the GX Land Application on August 14, 2015.

29.5-30.0 GHz band, the Commission adopted off-axis EIRP spectral density levels contained in Section 25.138(a). As illustrated in the off-axis EIRP spectral density plots in Exhibit B, the QCT90 GX and CCT120 GX meet the performance requirements in Section 25.138 (a) under clear sky conditions.² In addition, these earth station models will be operated within the -118 dBW/m²/MHz power flux-density at the earth's surface of the I5F2 and I5F3 satellite. Thus, both terminal types are demonstrated to be able to operate without causing unacceptable interference, consistent with the requirements of Section 25.209(f).³

Out of an abundance of caution, ISAT US provides gain patterns for receiver performance for protection of receive earth stations in the 19.7-20.2 GHz band from adjacent satellite interference based on the pattern specified in Section 25.209(a) and (b), even though the Commission has deleted the requirement in Section 25.138(e). As illustrated in Exhibit B, in the receive 19.7-20.2 GHz frequency band, the QCT90 GX and CCT120 GX terminals generally conform to the relevant antenna performance patterns in Section 25.209. Inmarsat acknowledges that there are minor exceedance at certain off-axis angles for the QCT90 GX and CCT120 GX, and understands and agrees to accept interference from adjacent FSS satellite networks to the extent the relevant receiving antenna performance requirements of Section 25.209 are exceeded.

Radiation hazard analyses for the QCT90 GX and CCT120 GX antenna and a discussion of the results are provided in Exhibit C.

The proposed QCT90 GX and CCT120 GX Terminals will be subject to the same national security requirements described in Section 4 of the GX Land Application. That discussion is incorporated by reference herein.

² ISAT US provides the off-axis EIRP density plots in accordance with the consolidated and streamlined requirements for providing such information, as adopted in the Commission's order consolidating and streamlining the Part 25 rules. *See Comprehensive Review of Licensing and Operating Rules for Satellite Services, Second Report and Order, 30 FCC Rcd 14713 ¶¶ 214-215 (2015) ("Part 25 Second Report and Order")*. Although the modified rules are not yet in effect, the Commission has determined that gain measurements need to be plotted only at the bottom and top of each band, and thus, that it is in the public interest not to require plots at the middle of the frequency ranges.

³ *See Part 25 Second Report and Order, Appendix B, Section 25.209(f)*.

III. RESPONSE TO QUESTION 36

ISAT US, Inc. submits this response to Question 36 of the FCC Form 312 out of an abundance of caution. In 2005, the Commission dismissed a Petition for Declaratory Ruling (the “Petition”) filed by Inmarsat Mobile Networks, Inc.’s affiliate, Inmarsat Global Limited (“Inmarsat Global”), seeking United States market access to provide MSS in the 2 GHz band. Subsequent to Inmarsat Global’s filing, the Commission assigned all 2 GHz spectrum currently allocated for MSS in the United States to two other satellite operators, and thus dismissed Inmarsat Global’s Petition.⁴

⁴ *Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands*, 20 FCC Rcd 19696 (2005); *Inmarsat Global Limited, Petition for Declaratory Ruling to Provide Mobile Satellite Service to the United States Using the 2 GHz and Extended Ku-Bands*, 20 FCC Rcd 19409 (2005).