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September 22, 2020

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: *Notice of Appearance and Submission for the Record,*
IBFS File No. SES-MOD-INTR2020-02656

Dear Ms. Dortch:

On September 18, 2020, Viasat, Inc. filed the above referenced application seeking authority to modify its current blanket license for earth stations aboard aircraft (call sign E170088). Please be advised that Space Exploration Holdings, LLC (“SpaceX”) wishes to participate in any Commission proceeding regarding the disposition of this application. Accordingly, please accept this “written submission referencing and regarding such pending filing,” 47 C.F.R. § 1.1202(d)(1), and enroll SpaceX as a party for purposes of the Commission’s *ex parte* rules, 47 C.F.R. §§ 1.1200 *et seq.* We trust that no *ex parte* presentations or other communications will be allowed in this restricted proceeding unless the undersigned, on behalf of SpaceX, receives advance notice and an opportunity to be present. 47 C.F.R. § 1.1208.

This proceeding is related to a condition imposed in Viasat’s current authorization, which required Viasat not to operate in certain Ka-band spectrum unless it either reached coordination agreement with affected non-geostationary orbit (“NGSO”) satellite systems or sought and obtained the Commission’s approval of a modification of this license including detailed technical demonstrations of how the licensee will protect the NGSO FSS satellite system. Accordingly, SpaceX also submits for the record of this proceeding a copy of the Request for Order to Show Cause filed in connection with that existing authorization.

Respectfully submitted,

William M. Wiltshire
Counsel for SpaceX

Attachment

cc: John P. Janka*
Karl Kensinger

* Service via electronic mail due to COVID-19.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

VIASAT, INC.

Operation of Earth Stations Aboard Aircraft
in the 18.8-19.3 GHz and 28.6-29.1 GHz
Bands

IBFS File Nos. SES-LIC-20170401-00357,
SES-LIC-20190411-00503, and
SES-MOD-20191216-01737

REQUEST FOR ORDER TO SHOW CAUSE

Pursuant to Sections 312 and 503 of the Communications Act of 1934¹ (the “Act”) and Sections 1.80, 1.91, and 25.160 of the Commission’s rules,² Space Exploration Holdings, LLC (“SpaceX”) hereby requests that the Commission issue an order directing Viasat, Inc. (“Viasat”) to show cause why (1) its licenses should not be revoked in pertinent part, (2) a cease and desist order should not be issued, and/or (3) monetary forfeitures should not be imposed, based on Viasat’s operation in the 18.8-19.3 GHz and 28.6-29.1 GHz bands in violation of the terms of the three blanket earth station licenses referenced above. Each of those licenses authorizes Viasat to operate Earth Stations Aboard Aircraft (“ESAAs”) in those bands only after either (1) successfully coordinating its operations with each non-geostationary orbit (“NGSO”) Fixed-Satellite Service (“FSS”) system operating in those bands, or (2) demonstrating to the Commission that such operation will not cause harmful interference to operating NGSO FSS systems. Although SpaceX began operating in these bands in 2019, has launched over 700 satellites to date, and has alerted Viasat to concerns over Viasat’s non-compliance with these license terms, there is reason to

¹ See 47 U.S.C. §§ 312, 503.

² See 47 C.F.R. §§ 1.80, 1.91, 25.160.

believe that Viasat has continued to operate its ESAAAs without satisfying either prong of these conditions.

Just last year, the Commission imposed a \$100,000 monetary forfeiture and ongoing compliance and reporting obligations upon a licensee for operation of an earth station on one unauthorized frequency for 13 days before the licensee voluntarily ceased those transmissions and self-reported the violation to the Commission.³ That order was intended to “send a strong signal that the Commission will not tolerate unauthorized operation of satellites, as such unauthorized operation risks satellite collisions and radio frequency interference, threatening critical commercial and government satellite communications.”⁴ Accordingly, the Commission should issue a show cause order to determine whether sanctions are appropriate for Viasat’s past violation of the terms of its ESAA licenses and whether it should put an end to Viasat’s improper activities going forward.

BACKGROUND

Under the U.S. Table of Frequency Allocations, the 18.8-19.3 GHz and 28.6-29.1 GHz bands (the “NGSO Ka-Bands”) are designated primarily for the use of NGSO FSS systems. Geostationary orbit (“GSO”) FSS systems may operate in these bands provided that they shall not cause harmful interference to, or claim protection from, NGSO FSS systems.⁵ Beginning in 2017, Viasat sought authority to operate ESAAAs in these bands (among others) communicating with two of its GSO satellites, Viasat-1 and Viasat-2. The first application was filed in April 2017. SpaceX and O3b Networks raised concerns about Viasat’s proposed use of the NGSO Ka-Bands, noting the potential for interference to NGSO FSS systems and requesting that the Commission deny or

³ See *L3Harris Technologies, Inc.*, 34 FCC Rcd. 12211 (EB 2019) (“*L3Harris*”).

⁴ *Id.* ¶ 1.

⁵ See 47 C.F.R. § 2.106 note NG165.

defer licensing until Viasat demonstrated that its operations would adequately protect NGSO operations in the NGSO Ka-Bands.⁶ The Commission ultimately granted Viasat's application in November 2017, but in doing so imposed the following condition:

Additionally, no later than sixty days before the scheduled initial launch of each NGSO FSS satellite system licensed or granted market access in the United States to operate in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands, the licensee must either: (1) notify the Commission in writing when an agreement has been reached with the NGSO satellite system operator, or (2) seek and obtain the Commission's approval of a modification of this license including detailed technical demonstrations of how the licensee will protect the NGSO FSS satellite system. If neither condition is met, the licensee must cease earth station operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.⁷

Viasat sought reconsideration solely with respect to this condition, requesting that the Commission delete it and replace it with a simple non-interference requirement.⁸ SpaceX opposed that request.⁹ The petition remains pending, which means that the terms of the earth station license – including the condition on Viasat's use of the NGSO Ka-Bands – remains in force.¹⁰

Viasat certified to the Commission that it had commenced operations under its ESAA authorization on the day it was issued – i.e., November 9, 2017.¹¹ It subsequently filed two other applications for ESAA authorizations that included communications with its GSO satellites using the NGSO Ka-Bands. Both of these new applications included technical showings purporting to demonstrate compatibility with NGSO FSS systems and a request for authority to operate on a

⁶ See, e.g., Reply of Space Exploration Holdings, LLC, File No. SES-LIC-20170401-00357 (June 26, 2017); Petition to Defer of O3b Limited, File No. SES-LIC-20170401-00357 (June 2, 2017).

⁷ Radio Station Authorization, Call Sign E170088, Condition 90447 (issued Nov. 9, 2017) (emphasis added).

⁸ See Petition for Partial Reconsideration of Viasat, Inc., IBFS File No. SES-LIC-20170401-00357 (Dec. 11, 2017).

⁹ See Opposition of Space Exploration Holdings, LLC, IBFS File No. SES-LIC-20170401-00357 (Dec. 26, 2017).

¹⁰ See 47 C.F.R. § 1.102(b)(1)-(2). Viasat did not request a stay of the order or the specific condition of interest, and the Commission did not grant a stay on its own prerogative.

¹¹ See Viasat, Inc. – Certification of Commencement of Operation, IBFS File No. SES-LIC-20170401-00357 (Nov. 9, 2018).

non-interference, unprotected basis in the NGSO Ka-Bands.¹² The Commission granted one in November 2019 and the other in April 2020, but imposed the following condition on both authorizations:

ESAAs authorized herein must be in compliance with the terms of coordination agreements with operators of non-geostationary orbit Fixed Satellite Service space stations operating in the 18.8-19.3 and 28.6-29.1 GHz frequency band. In the event another NGSO FSS system commences operation in the 18.8-19.3 and 28.6-29.1 GHz frequency bands. *ESAAs operating pursuant to this authorization must cease operation unless and until such operation has been coordinated with the new NGSO system operator or the ESAA licensee demonstrates that such operation will not cause harmful interference to the new NGSO system.*¹³

Viasat did not seek reconsideration of either of these earth station authorizations, and instead immediately certified to the Commission that it had commenced operations.¹⁴

The Commission has authorized several NGSO FSS systems to operate in the NGSO Ka-Bands. For example, O3b Networks was first authorized in 2012; it launched and began operations of its first four satellites in June 2013, and continued to expand its constellation thereafter.¹⁵ Telesat Canada was authorized in 2017, and launched its first satellite in 2018.¹⁶ In March 2018, the Commission granted SpaceX's application for authority to deploy an NGSO FSS constellation that operates in the NGSO Ka-Bands (as well as other spectrum).¹⁷ On November 11, 2019 – just two days after Viasat received and began operating under its second ESAA authorization – SpaceX

¹² See Application, IBFS File No. SES-LIC-20190411-00503, Exhibit A at 4, Attachment 1 at 2-5 (Apr. 11, 2019); Application, IBFS File No. SES-MOD-20190212-00172, Exhibit A at 5, Attachment 1 at 5-8 (Feb. 12, 2019).

¹³ Radio Station Authorization, Call Sign E190201, Condition 90257 (issued Nov. 15, 2019) (emphasis added); Radio Station Authorization, Call Sign E180006, Condition 90257 (issued Apr. 1, 2020) (emphasis added).

¹⁴ See, e.g., Viasat, Inc. – Certification of Commencement of Operation, IBFS File No. SES-LIC-20190411-00503 (Jan. 21, 2020) (certifying commencement on same day as grant – November 15, 2019).

¹⁵ See Grant Stamp, IBFS File No. SAT-AMD-2015-00004, nn. 1 and 2 (Jan. 22, 2015) (discussing licensing and launch history).

¹⁶ See *Telesat Canada*, 32 FCC Rcd. 9663 (2017); Letter from Henry Goldberg to Marlene H. Dortch, IBFS File No. SAT-PDR-20161115-00108 (July 26, 2019) (noting launch of first satellite on January 12, 2018).

¹⁷ See *Space Exploration Holdings, LLC*, 33 FCC Rcd. 3391, ¶ 11 (2018)

launched and began operating its first set of 60 satellites in that spectrum. It has since launched almost 700 more such satellites.

However, Viasat has failed to reach a coordination agreement with SpaceX for its ESAAAs' use of the NGSO Ka-Bands. As the Commission confirmed, demonstration of how a GSO ESAA can operate in these bands without interfering with an NGSO system like SpaceX's is entirely Viasat's responsibility. The GSO system "is expected to show, to the NGSO system satisfaction, that it is capable of protecting the NGSO's operation. The only burden on the NGSO system is to examine the GSO showing in good faith to determine its acceptability."¹⁸

Viasat has notified the Commission of successful coordination with only one NGSO FSS system.¹⁹ In June 2020, SpaceX alerted both Viasat and the Commission to its concern that Viasat was operating in the NGSO Ka-Bands in violation of its ESAA authorizations,²⁰ and SpaceX has raised that concern again with Viasat on several occasions since. Despite repeated requests, Viasat does not deny that it is, in fact, operating in the band. Nor is SpaceX aware of any submission to the Commission by Viasat providing the further detailed technical showing contemplated in the conditions to Viasat's ESAA authorizations to demonstrate that its operations in these bands would not cause harmful interference to SpaceX or any other operational NGSO system.

DISCUSSION

Section 301 of the Act and Section 25.102(a) of the Commission's rules prohibit the use or operation of any apparatus for the transmission of energy or communications or signals by an

¹⁸ See *Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, 35 FCC Rcd. 5137, ¶ 19 (2020).

¹⁹ Although not filed in any of the ESAA licensing proceedings, Viasat reports that it has reached a coordination agreement covering the NGSO Ka-Bands with OneWeb. See Application, IBFS File No. SES-MOD-20190212-00172, Attachment 1 at 5 (Feb. 12, 2019).

²⁰ See Letter from P. Cooper to J. Albuquerque (June 4, 2020) [CONFIDENTIAL].

earth station except under and in accordance with a Commission-granted authorization.²¹ In granting three ESAA licenses to Viasat, the Commission took great care to condition its operations in the NGSO Ka-Bands in a way that would ensure that the primary service in the bands – NGSO FSS – would not suffer interference as a result. It would appear, however, that Viasat has ignored those requirements and is operating in violation of the conditions of its licenses. As discussed below, the Commission should issue a show cause order to Viasat to confirm the facts and determine whether partial license revocation, a cease and desist order, a forfeiture, or some combination would be appropriate in these circumstances.

A. The Commission Has Authority to Impose a Range of Administrative Sanctions

Section 312 of the Act establishes the Commission’s authority to impose certain administrative sanctions. For example, it empowers the Commission to revoke any station license “for willful or repeated failure to operate substantially as set forth in the license.”²² For this purpose, the statute defines “willful” as “the conscious and deliberate commission or omission of [an] act, irrespective of any intent to violate any provision” of the license or the Commission’s rules, and defines “repeated” as “the commission or omission of such act more than once or, if such commission or omission is continuous, for more than one day.”²³ The statute also gives the Commission an option short of revocation, providing that where any person “has failed to operate substantially as set forth in a license . . . the Commission may order such person to cease and desist from such action.”²⁴ Section 1.91(a) of the Commission’s rules implements these statutory

²¹ See 47 U.S.C. § 301; 47 C.F.R. § 25.102(a).

²² 47 U.S.C. § 312(a)(3). The term “station license” is defined in the Act as “that instrument of authorization required by this chapter or the rules and regulations of the Commission made pursuant to this chapter, for the use or operation of apparatus for transmission of energy, or communications, or signals by radio, by whatever name the instrument may be designated by the Commission.” *Id.* § 153(49).

²³ *Id.* § 312(f)(1) and (2).

²⁴ *Id.* § 312(b).

prerogatives, providing that “[i]f it appears that a station license or construction permit should be revoked and/or that a cease and desist order should be issued, the Commission will issue an order directing the person to show cause why an order of revocation or a cease and desist order, as the facts may warrant, should not be issued.”²⁵

Section 503 of the Act authorizes another form of administrative sanction: monetary forfeiture. Specifically, the statute provides that any person that the Commission determines has “willfully or repeatedly failed to comply substantially with the terms and conditions of any license, permit, certificate, or other instrument or authorization issued by the Commission” shall be liable for a forfeiture penalty.²⁶ Section 25.160 of the Commission’s rules similarly provides that a forfeiture may be imposed “for failure to operate in conformance with the Communications Act, license specifications, [or] any conditions imposed on an authorization.”²⁷ Section 1.80 of the Commission’s rules sets forth the procedures for imposing a forfeiture, including factors to be considered in determining an appropriate monetary amount.²⁸ The statute and rule also make clear that a forfeiture penalty “shall be in addition to any other penalty provided for” by the Act.²⁹ Accordingly, the Commission has a range of options available should it determine that Viasat has failed to operate in compliance with the terms of its ESAA licenses and that therefore a sanction is appropriate.

²⁵ 47 C.F.R. § 1.91(a).

²⁶ 47 U.S.C. § 503(b)(1)(A).

²⁷ 47 C.F.R. § 25.160(a).

²⁸ *See id.* § 1.80.

²⁹ 47 U.S.C. § 503(b)(1); 47 C.F.R. § 1.80 note to paragraph (a).

B. The Commission Should Investigate Whether Viasat Willfully and Repeatedly Violated the Terms of its ESAA Licenses With Respect to the NGSO Ka-Bands

Viasat has not reached a coordination agreement with SpaceX for operation of ESAAAs in the NGSO Ka-Bands, and while Viasat has indicated that it has such an agreement with OneWeb it has made no such claim with respect to two other operational NGSO FSS systems (O3b and Telesat). Nor has Viasat submitted a technical showing to the Commission to demonstrate how it would operate without causing interference to NGSO FSS systems. Under the terms of its 2017 ESAA authorization, Viasat was obligated to cease operations in the NGSO Ka-Bands unless – sixty days *before* the scheduled launch of an NGSO system operating in that spectrum – Viasat had either finalized coordination or sought *and obtained* a modification of its license to implement protections for NGSO FSS systems. Viasat’s other two ESAA authorizations similarly specify that Viasat must cease operations in the NGSO Ka-Bands in the absence of coordination or a demonstration that its operations would not cause interference to NGSO FSS systems.

Viasat was well aware of these conditions. It sought partial reconsideration solely with respect to that aspect of its 2017 ESAA license. Moreover, SpaceX has on a number of occasions over the last five months alerted Viasat to the fact that its operations in the NGSO Ka-Bands violates the conditions of its ESAA licenses. O3b has been operating in this spectrum for over five years and SpaceX over the last year has launched and begun operating hundreds of satellites that use these bands. Yet there is no evidence that Viasat has ceased its ESAA operations in that spectrum even though it patently has not satisfied either of the requirements in its licenses for continuing such operations. Indeed, given the fact that O3b’s operations predate the grant of Viasat’s first ESAA authorization, the condition in that authorization applied immediately to preclude Viasat’s operations in the NGSO Ka-Bands absent a further showing. If this is the case, Viasat’s knowing and ongoing ESAA operations in the NGSO Ka-Bands are both willful and

repeated violations of its licenses for purposes of the administrative sanctions authorized under the Act.

The Commission cannot allow any of its licensees to violate the clear terms and conditions of an authorization – especially where doing so could result in harmful interference to other spectrum users and their customers in the United States. As the Commission found in sanctioning another satellite operator for exceeding the terms of its authorization,

[e]nsuring that satellite-to-ground services operate within their assigned frequencies is essential in preventing harmful interference to communications on earth and in space. It is therefore important for the Commission to ensure that the licensees who operate in these arenas do so in a manner compliant with their authorizations.³⁰

In these circumstances, the Commission must investigate Viasat's ESAA operations to confirm the nature and extent of its operations in the NGSO Ka-Bands notwithstanding the launch and operation of NGSO FSS systems by SpaceX and others authorized by the Commission to operate in those bands. It should initiate that investigation by sending Viasat an order to show cause why the Commission should not (1) revoke Viasat's authorization to operate ESAAAs in the 18.8-19.3 GHz and 28.6-29.1 GHz bands, (2) issue a cease and desist order with respect to Viasat's ESAA operations in those bands, and/or (3) impose monetary forfeitures.

The Commission has recognized the importance of ensuring that earth station licensees operate in conformance with their authorizations. All evidence indicates that Viasat has failed to comply with the conditions precedent to use of the NGSO Ka-Bands yet continues to operate on those frequencies despite communications from SpaceX alerting Viasat to its license violations. The Commission must investigate and, if appropriate, impose sanctions to deter others from similarly ignoring conditions imposed in their licenses to prevent harmful interference to other

³⁰ L3Harris ¶ 1.

spectrum users. SpaceX urges the Commission to initiate this process immediately to minimize the potential for interference as NGSO FSS operators continue to ramp up their services.

Respectfully submitted,

SPACE EXPLORATION HOLDINGS, LLC

By: */s/ David Goldman*

David Goldman

Director, Satellite Policy

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September 18, 2020

CERTIFICATE OF SERVICE

I hereby certify that, on this 18th day of September, 2020, a copy of the foregoing pleading was served by first class U.S. mail upon:

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