

Brian D. Weimer  
202.747.1930 direct  
bweimer@sheppardmullin.com

October 17, 2019

**VIA IBFS**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Re: **Notice of Written Ex Parte**  
**Space Exploration Holdings, LLC, IBFS File Nos. SAT-STA-20190924-00098,**  
**SAT-MOD-20181108-00083, SAT-MOD-20190830-00087**  
**SpaceX Services, Inc., IBFS File Nos. SES-STA-20190925-01225 through -01234,**  
**-01242 through -01244**

Dear Ms. Dortch:

WorldVu Satellites Limited (“OneWeb”) hereby submits this letter to oppose the above-referenced requests for special temporary authority (the “STA Requests”) filed by Space Exploration Holdings, LLC and SpaceX Services, Inc. (collectively “SpaceX”).<sup>1</sup> The STA Requests are a clear attempt by SpaceX to circumvent the Federal Communications Commission’s (“Commission”) well-established review process for pending applications, SpaceX’s second such effort this year.<sup>2</sup>

---

<sup>1</sup> See, et. al., Space Exploration Holdings, LLC, Request for Special Temporary Authority, IBFS File No. SAT-STA-20190924-00098 (filed Sep. 24, 2019) (“STA Requests”).

<sup>2</sup> See Space Exploration Holdings, LLC, Request for Special Temporary Authority, IBFS File No. SAT-STA-20190405-00023 (filed Apr. 5, 2019); SpaceX Services, Inc., Request for Special Temporary Authority, IBFS File Nos. SES-STA-20190405-00453, et. al. (filed Apr. 5, 2019); see also Space Exploration Holdings, LLC, Request for Special Temporary Authority, Grant, IBFS File No. SAT-STA-20190405-00023 (May 5, 2019) (“STA Grant”); Space Exploration Holdings, LLC, Request for Modification of the Authorization for the SpaceX NGSO Satellite System, Order and Authorization, 34 FCC Rcd. 2526 (Apr. 26, 2019) (“SpaceX First Modification Grant”).

In the instant STA Requests, SpaceX attempts to bypass the Commission's review process by asking the Commission for STA to do exactly what it is requesting in a pending modification application that is still in a comment cycle and, therefore, does not have a completed public record. On August 30, SpaceX filed the Second Modification Application.<sup>3</sup> The Second Modification Application was placed on public notice on September 13, initial comments from the public were due on October 15, and the full public comment cycle will not be completed until mid-November.<sup>4</sup> Even before comments were due on the Second Modification Application, SpaceX filed the STA Requests, seeking authority to launch satellites by the end of October in accordance with the parameters of the Second Modification Application.<sup>5</sup> The STA Requests demonstrate SpaceX's utter disregard for the value of the Commission's legally-mandated process of hearing from the public and any affected parties about concerns they might have with SpaceX's "rapid iteration" and "test and discard" philosophy reflected in the Second Modification Application.<sup>6</sup> As such, the Commission should reject SpaceX's attempt to shortcut the standard review of its pending space station Second Modification Application by asking the Commission to issue a *de facto* authorization of the Second Modification Application through STA before interested parties have even had the opportunity to comment.<sup>7</sup>

Indeed, the record now developing with respect to the Second Modification Application includes multiple submissions by non-geostationary, fixed-satellite service ("NGSO FSS")

---

<sup>3</sup> See Space Exploration Holdings, LLC, Application for Modification of Authorization for the SpaceX NGSO Satellite System, IBFS File No. SAT-MOD-20190830-00087 (filed Aug. 30, 2019) ("Second Modification Application").

<sup>4</sup> The SpaceX Second Modification Application was placed on public notice on September 13, 2019 and the comment cycle will not close until the middle of November 2019.

<sup>5</sup> STA Requests, Narrative at 1.

<sup>6</sup> See Petition to Deny or Defer of WorldVu Satellites Limited, IBFS File No. SAT-MOD-20181108-00083 at 15 (filed Feb. 8, 2019).

<sup>7</sup> As a threshold matter, OneWeb recognizes that as a portion of the STA Requests SpaceX seeks authority for launch and early operations and testing. As the Commission has stated, "[s]uch operations have been granted through STAs routinely in the past for similar in-orbit (IOT) operations." STA Grant at 3. OneWeb has no objection to the grant of STA for these types of operations. However, SpaceX also asks for STA to deploy its space stations in orbital locations not currently authorized by the Commission, and only contemplated in the pending Second Modification Application. OneWeb therefore clarifies that its objections are specifically to the grant of STA for operation according to the parameters of the Second Modification Application.

operators highlighting very troubling issues that should stop any action on the STA Requests before the Commission has conducted a complete review of the record. In particular, OneWeb highlights three considerations for the Commission that strongly caution against premature grant of the STA Requests:

- *First*, On October 15, 2019 Kepler Communications, Inc. (“Kepler”), an NGSO FSS market access grantee in the current Ku-/Ka-band processing round, filed a Petition to Defer or Deny detailing the substantial spectrum interference and orbital debris issues presented by the Second Modification Application.<sup>8</sup> Kepler demonstrates the potential for the modified SpaceX constellation to disrupt the provision of service to customers and highlights SpaceX’s alarming in-orbit failure rate.
  - OneWeb notes SpaceX’s in-orbit failure rate is currently surpassing metrics SpaceX had assured the Commission it would never reach—SpaceX has previously described failure rates of “10 or 5 percent as unacceptable, and even a rate of 1 percent” as “unlikely.”<sup>9</sup>
  - In addition, SES Americom, Inc. and O3b Limited (“SES/O3b”) also filed a Petition to Defer the Second Modification Application, expressing serious concerns about SpaceX’s purported equivalent flux power density (“EPFD”) compliance and the Second Modification Application’s potential worsening of the NGSO interference environment.<sup>10</sup> Together, these Petitions demonstrate the significant, unresolved issues presented by the Second Modification Application, and the Commission should not act on the STA Requests until Commission review of the Second Modification Application is complete.
- *Second*, both Kepler and SES/O3b correctly point out that the Commission must exercise caution in reviewing the Second Modification Application in light of (i) SpaceX’s previously cavalier approach to the stakeholders who urged the Commission to carefully evaluate the potentially serious consequences of the SpaceX First Modification Grant and

---

<sup>8</sup> See Letter from Nickolas G. Spina, Director, Launch and Regulatory Affairs, Kepler Communications Inc., to Marlene H. Dortch, Secretary, FCC, IBFS File Nos. SAT-LOA-20161115-00118, *et. al.*, (Oct. 15, 2019) (“Kepler Petitions”).

<sup>9</sup> *Id.* at 16. See also Letter from William M. Wiltshire, Counsel to SpaceX, to Jose P. Albuquerque, Chief, Satellite Division, FCC, IBFS File No. SAT-LOA-20161115-00118 at 4 (Apr. 20, 2017).

<sup>10</sup> See Petition to Deny or Defer of SES Americom, Inc. and O3b Limited, IBFS File No. SAT-MOD-20190830-00087 (filed Oct. 15, 2019) (“SES/O3b Petition”).

(ii) SpaceX's grandiose ambitions to operate an NGSO constellation comprising more than 40,000 satellites.<sup>11</sup> The orbital debris and radiofrequency interference issues highlighted by Kepler are compelling and merit serious review by the Commission and key stakeholders in order to preserve the LEO environment and the substantial on-orbit investments made by other satellite operators.<sup>12</sup> Similarly, SES/O3b's well-founded concerns that SpaceX is attempting to undermine the existing EPFD compliance regime must be addressed in order to avoid negatively impacting GSO operations and creating uncertainty for other NGSO FSS operators.<sup>13</sup>

- *Third*, OneWeb agrees with Kepler that as a threshold matter, the Commission should address OneWeb's pending Petition for Reconsideration of the SpaceX First Modification Grant before taking any action on the Second Modification Application or the STA Requests.<sup>14</sup> The OneWeb Petition for Reconsideration raises important issues that have direct bearing on the further changes SpaceX is seeking in the Second Modification Application.<sup>15</sup>

The serious concerns raised in connection with SpaceX's First Modification Grant, as well as those raised in connection with the Second Modification Application thus far, underscore

---

<sup>11</sup> See Jonathan O'Callaghan, *SpaceX's Application For 30,000 Extra Starlink Satellites Raises New Concerns About Regulation*, FORBES (Oct. 16, 2019 at 3:43pm), <https://www.forbes.com/sites/jonathanocallaghan/2019/10/16/spacex-accused-of-evading-rules-with-proposal-for-30000-extra-starlink-satellites/#2d0694354f85>.

<sup>12</sup> For example, SpaceX has already failed to live up to its assertion that "SpaceX satellites will continue to perform conjunction avoidance" during the de-orbit period, as a "bug in [SpaceX's] on-call paging system" prevented SpaceX from avoiding a potential collision with an ESA Aeolus satellite, forcing the Aeolus satellite to perform a collision avoidance maneuver. See Space Exploration Holdings, LLC, Application for Modification of Authorization for the SpaceX NGSO Satellite System, IBFS File No. SAT-MOD-20181108-00083, Technical Attachment at 39 (Nov. 8, 2018); see also Jonathan O'Callaghan, *SpaceX Declined To Move A Starlink Satellite At Risk Of Collision With A European Satellite*, Forbes (Sep. 2, 2019 at 3:55pm), <https://www.forbes.com/sites/jonathanocallaghan/2019/09/02/spacex-refused-to-move-a-starlink-satellite-at-risk-of-collision-with-a-european-satellite/#671576541f62>.

<sup>13</sup> See SES/O3b Petition at 3-6.

<sup>14</sup> Kepler Petitions at 2.

<sup>15</sup> See Petition for Reconsideration and Petition to Condition of WorldVu Satellites Limited, IBFS File Nos. SAT-MOD-20181108-00083, *et. al.*, (filed May 28, 2019).

why the Commission should review the merits of the Second Modification Application thoroughly. The Commission should use this opportunity to remind applicants of the legitimacy of its regulatory processes and not allow SpaceX to treat these well-established processes as inconveniences to its business plan. To do otherwise would be to grant *de facto* approval of the Second Modification Application through STA, and encourage future actors to disregard the Commission's clear and well-established process for requesting modifications such as these.<sup>16</sup>

### III. CONCLUSION

For the foregoing reasons, SpaceX has failed to justify the need for STA and any grant of the STA Requests would undercut the Commission's own review process. OneWeb respectfully submits that the STA Requests should be denied pending Commission review of the Second Modification Application.

Please do not hesitate to contact the undersigned with any questions.

Very truly yours,

*/s/ Brian D. Weimer*

Brian D. Weimer  
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

cc: William M. Wiltshire, Counsel to SpaceX  
Tom Sullivan (FCC)  
Jose Albuquerque (FCC)  
Karl Kensinger (FCC)  
Stephen Duall (FCC)

---

<sup>16</sup> Additionally, the Commission should consider the significant differences between terrestrial and satellite STA. The nature of space is such that "temporary" authorization can become permanent simply due to the lack of physical control over the satellites. For instance, SpaceX promises to "relocate satellites" if the Second Modification Application is not approved. However, as the results of the initial Starlink launch have already demonstrated, it is entirely possible that problems may occur with the propulsion systems of the SpaceX satellites in position under STA. If those satellites are unable to "relocate" and the Second Modification Application is not approved, SpaceX's satellites will nonetheless remain in the configuration of the Second Modification Application until they begin to naturally deorbit.

**CERTIFICATE OF SERVICE**

I, Samuel Swoyer, hereby certify that on this 17th day of October 2019, a copy of the foregoing letter is being sent via first class, U.S. Mail, postage paid, to the following:

Patricia Cooper  
Vice President, Satellite Government Affairs  
SPACE EXPLORATION TECHNOLOGIES CORP. &  
SPACE EX SERVICES, INC.  
1155 F Street, N.W.  
Suite 475  
Washington, DC 20004

William M. Wiltshire  
HARRIS, WILTSHIRE & GRANNIS LLP  
1919 M Street, N.W.  
Suite 800  
Washington, DC 20036  
*Counsel to Space Exploration Holdings, LLC &  
SpaceX Services, Inc.*

/s/ Samuel Swoyer  
Samuel Swoyer