

Nos. 21-1123, 21-1125

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IN THE UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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VIASAT, INC.,  
*Appellant,*

v.

FEDERAL COMMUNICATIONS COMMISSION,  
*Appellee,*

SPACE EXPLORATION HOLDINGS, LLC,  
*Movant-Intervenor for  
Respondent.*

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On Appeal from the Federal Communications Commission  
IBS File No. SAT-MOD-20200417-00037

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**SPACE EXPLORATION HOLDINGS, LLC'S OPPOSITION TO  
MOTION FOR STAY PENDING JUDICIAL REVIEW**

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## TABLE OF CONTENTS

INTRODUCTION .....	1
BACKGROUND .....	4
ARGUMENT .....	8
A.    Viasat Is Unlikely To Succeed On The Merits .....	8
1. <i>Viasat must overcome an undisputed categorical exclusion from further environmental processing.</i> .....	8
2. <i>Viasat’s assertions of significant environmental impact based on 2,824 satellites depart from its arguments to the Commission.</i> .....	10
3. <i>Viasat seeks to render toothless the NEPA standard for overcoming a categorical exclusion.</i> .....	12
4. <i>Viasat cannot surmount the deferential standard of review.</i> .....	14
B.    Viasat Will Not Be Irreparably Harmed In The Absence Of A Stay .....	17
C.    A Stay Would Cause Serious Harm To SpaceX .....	19
D.    The Public Interest Tilts Sharply Against A Stay .....	20
CONCLUSION .....	23

## TABLE OF AUTHORITIES

### CASES:

<i>Alaska Ctr. for Env't v. U.S. Forest Serv.</i> , 189 F.3d 851 (9th Cir. 1999) .....	16
<i>American Bird Conservancy, Inc. v. FCC</i> 516 F.3d 1027 (D.C. Cir. 2008).....	12
<i>American Wild Horses Campaign v. Bernhardt</i> , 963 F.3d 1001 (9th Cir. 2020) .....	14
<i>Citizens for Resp. &amp; Ethics in Wash. v. Federal Election Comm'n</i> , 904 F.3d 1014 (D.C. Cir. 2018).....	8
<i>City of New York v. ICC</i> , 4 F.3d 181 (2d Cir. 1993) .....	9, 10, 11
<i>Cuomo v. U.S. Nuclear Regul. Comm'n</i> 772 F.2d 972 (D.C. Cir. 1985) .....	22
<i>In re Mitigation of Orbital Debris in the New Space Age</i> , 35 FCC Rcd. 4,156 (2020).....	16
<i>In re Rural Digit. Opportunity Fund Connect Am. Fund</i> , 35 FCC Rcd. 686 (2020).....	21
<i>In re Space Expl. Holdings, LLC</i> , 33 FCC Rcd. 3,391 (2018).....	4
<i>National Tr. for Historic Pres. in U.S. v. Dole</i> , 828 F.2d 776 (D.C. Cir. 1987).....	10, 11
<i>Nken v. Holder</i> , 556 U.S. 418 (2009).....	8
<i>Realty Income Tr. v. Eckerd</i> , 564 F.2d 447 (D.C. Cir. 1977).....	18, 22
<i>United Keetoowah Band of Cherokee Indians v. FCC</i> , 933 F.3d 728 (D.C. Cir. 2019).....	10

*Washington Metro. Area Transit Comm’n v. Holiday Tours, Inc.*,  
559 F.2d 841 (D.C. Cir. 1977).....18

*Wisconsin Gas Co. v. FERC*,  
758 F.2d 669 (D.C. Cir. 1985).....17, 18

**OTHER AUTHORITIES:**

40 C.F.R.

§ 1501.4(a) .....9

§ 1501.4(b).....9

§ 1501.4 (b)(1) .....15

§ 1508.27(b)(5) .....13

47 C.F.R.

§ 1.1306.....9

§ 1.1307(c) .....9, 11

Daneman, Matt, *SpaceX License Mod Includes Near-Hit Reports, Accepting Interference*, COMMC’NS DAILY, Apr. 27, 2021 .....7

Duffy, Kate, *SpaceX got FCC permission to fly Starlink satellites at a lower orbit. Rivals who previously objected, including Amazon, say they’re happy with the decision*, BUS. INSIDER, Apr. 28, 2021 .....7

## INTRODUCTION

Viasat's request for a stay—filed more than five weeks after the Commission's decision—seeks to halt SpaceX's years-long effort to expand broadband internet service to unserved and underserved populations through its Starlink constellation of satellites. This Court should reject Viasat's transparent bid to co-opt the National Environmental Policy Act (NEPA) and the procedure for extraordinary stay relief as weapons of commercial warfare.

SpaceX's license modification enhances Starlink service while reducing any impacts from its satellites by lowering (from 1,100+ km to 540+ km) a subset of 2,824 within the originally authorized constellation of ~4,400 satellites. Discarding its kitchen-sink approach below, Viasat now seeks to stay and overturn the Commission's unanimous 57-page decision on a single ground: that NEPA requires the preparation of an environmental assessment (EA) to determine whether this particular subset of satellites would have a significant impact on the human environment and biosphere.

Viasat's newfound environmentalism is belied by its actions at every turn. Viasat failed to raise *any* environmental concerns in connection with *any* other satellite authorization, including SpaceX's authorization to operate Starlink satellites at a different altitude and its prior request (nearly identical to the one at issue here) to lower many of those satellites. To the contrary, Viasat—a non-U.S. licensee that

has previously sought to escape Commission regulation altogether—ultimately relies on “competitive harm” to support its stay request. But stifling competition and protecting profits is not what NEPA is about.

Viasat fails to satisfy any of the four factors for obtaining a stay. This Court is very unlikely to overturn the Commission’s methodical, issue-by-issue treatment of Viasat’s unprecedented and thinly-supported NEPA arguments. Viasat does not dispute that, even assuming NEPA applies in space (an issue the Commission did not resolve), Commission regulations categorically exclude the modification from further NEPA review. The Commission’s decision provides ample reasons not to override that categorical exclusion and require a more in-depth review of purported environmental impacts from the subset of satellites at issue. The Commission agreed with SpaceX (and other agencies) on the extensive record before it that the alleged environmental effects are insubstantial or unsubstantiated, or have already been addressed through other means or mitigating conditions. Both the Commission’s decision to invoke the categorical exclusion, and the decision whether to override the exclusion, are entitled to substantial deference.

Viasat likewise fails to identify anything approaching irreparable harm in the absence of a stay. Viasat’s alleged economic injuries from marketplace competition—which cast serious doubt on whether Viasat is within NEPA’s zone of interests—do not rise to that level. Viasat’s alternative request for expedition (which

SpaceX does not oppose), moreover, would moderate any possible injury (however remote) stemming from the limited number of satellites to be launched during the course of this appeal.

At the same time, a stay would inflict major injuries on SpaceX by shrinking its legitimately earned advantage over rivals trying to enter the market using low-Earth orbit satellites (Viasat's very objective). A stay would slow SpaceX's deployment of satellites and service in the highly competitive satellite broadband internet business; disrupt its supply chain, industrial base, and manufacturing operations; and idle its employees, equipment, facilities, and vendors. These impacts would significantly diminish the returns on SpaceX's immense investment, which Viasat hypocritically discounts while claiming irreparable competitive injury to itself.

More broadly, the Commission has recognized that the paramount public interest in extending broadband internet service to unserved and underserved areas supports the continued improvement of the Starlink constellation. A stay would not only impede that goal, but also impair U.S. strategic interests as foreign-licensed systems like Viasat's (that claim not to be subject to similar Commission oversight or NEPA) close the gap in satellite deployment. Accordingly, a stay pending appeal would plainly *disserve* the public interest—to an extent far greater than any speculative environmental harms that the Commission has already considered.

## BACKGROUND

SpaceX's Starlink system uses a constellation of low-Earth orbit satellites to deliver the world's first direct-to-consumer, high-speed, low-latency satellite internet service. In 2016, SpaceX applied to launch and operate 4,425 (since reduced to 4,408) satellites at orbital altitudes of 1,110-1,325 km. Order ¶¶ 1-2 & n.4. In 2018, the Commission granted that authorization to “enable SpaceX to bring high-speed, reliable, and affordable broadband service to consumers in the United States and around the world, including areas underserved or currently unserved by existing networks.” *In re Space Expl. Holdings, LLC*, 33 FCC Rcd. 3,391, 3,391-3,392 (2018).

In April 2019, the Commission granted SpaceX a modification to lower 1,584 of those satellites to an altitude of 550 km, to improve broadband latency while decreasing the potential for orbital debris. In December 2019, the Commission granted SpaceX a second modification to reconfigure its satellites within the 550 km orbital shell, with the goal of expanding coverage and capacity. In both instances, the Commission “found that grant of the modification was in the public interest.” Order ¶ 3. At no point did any commenter—including Viasat—raise NEPA concerns.

In April 2020, SpaceX submitted a modification application to lower the remaining 2,824 previously authorized satellites to altitudes of 540-570 km. More



than eight months later (and almost six months after Viasat filed other objections), Viasat asserted that NEPA required the Commission to conduct an EA prior to granting SpaceX's modification—an objection it had never made during the initial authorization of the 4,425-satellite constellation, during two earlier modification requests, or during any other request by other operators to launch satellites.

On April 27, 2021, more than a year after SpaceX filed its application and on the basis of a voluminous record of more than 250 pleadings, Order ¶ 5 nn.24-36, the full Commission granted—with significant conditions—SpaceX's third modification application. The Commission unanimously concluded that a grant was in the public interest because the modification (as conditioned) would “improve service to remote and underserved areas, including polar regions, and \*\*\* facilitate the deployment of the Starlink system overall”; would “have beneficial effects with respect to orbital debris mitigation”; and would “not present significant interference problems.” *Id.* ¶¶ 12-13.

In addition to considering and resolving technical and operational issues raised in the record, the Commission analyzed and rejected the novel claim that NEPA required the preparation of an EA. Order ¶¶ 72-89. “As a threshold matter,” the Commission recognized that “it is not clear that all of the issues raised by these parties are within the scope of NEPA or related to [its] action in approving SpaceX's Third Modification application.” *Id.* ¶ 77. Even after assuming “for purposes of

[its] analysis, and out of an abundance of caution” that “NEPA may apply,” the Commission concluded that the NEPA claim fell short as applied to the 2,824 satellites at issue in this “particular action”—rejecting Viasat’s attempt to sweep in the possible impacts of other SpaceX authorizations or future satellites not yet authorized. *Id.* ¶¶ 77-78.

Specifically, the Commission found that:

- Viasat’s assertions as to the effect of the launch and demise of SpaceX satellites on the atmosphere were “insufficient” and “too vague to warrant further consideration,” and failed to overcome the fact that the Federal Aviation Administration (FAA) had already prepared its own EA and (with NASA) found SpaceX’s launches had “No Significant Impact,” *id.* ¶¶ 81-82;
- Viasat’s “general assertions” regarding purported human casualty risks and damage to the environment from theoretical debris from fully demisable Starlink satellites surviving reentry were “not accurate” based on the record, which demonstrates that “the calculated risk of human casualty from materials reaching the Earth’s surface is roughly zero,” *id.* ¶¶ 84-85;
- Viasat’s assertions that “light pollution caused by large satellite constellations will have aesthetic, scientific, cultural, social, and health effects” did not, based on the “robust record on these issues,” support the need to prepare an EA given SpaceX’s well-documented steps to mitigate the brightness and reflectivity of its satellites and statements from the astronomy community on the benefits of the lowered altitude, *id.* ¶¶ 86-87; and
- Viasat’s assertions regarding an increased risk of collisions and orbital debris “failed to set forth in detail reasons justifying or circumstances necessitating environmental consideration,” given that the Commission had already reviewed and concluded that SpaceX’s orbital debris mitigation plan is consistent with the Commission’s rules and the public interest (on top of doubts that

“such alleged impacts in space are even within the scope of NEPA (which applies to effects on the quality of the human environment”), *id.* ¶ 89.

A number of competitors who had opposed SpaceX’s modification application praised the Commissions’ Order. Amazon called the Order a “positive outcome” that “address[es] [its] primary concerns.” Kate Duffy, *SpaceX got FCC permission to fly Starlink satellites at a lower orbit. Rivals who previously objected, including Amazon, say they’re happy with the decision*, BUS. INSIDER, Apr. 28, 2021. OneWeb told reporters that it “looks forward to continuing amicable and close in-flight coordination with SpaceX.” *Id.* Even Viasat praised much of the Commission’s analysis, saying that it was “pleased the Commission confirmed that Starlink satellites must be reliable and safe.” Matt Daneman, *SpaceX License Mod Includes Near-Hit Reports, Accepting Interference*, COMMC’NS DAILY, Apr. 27, 2021, at 3.

Since the Order issued, SpaceX has continued with previously scheduled Starlink launches. On average, SpaceX has two Starlink launches per month scheduled through 2021. *See* Ex. A, Decl. of Samuel Gibbs IV ¶ 10 (“Gibbs Decl.”).

Viasat did not file its notice of appeal or request a stay from the Commission until nearly a month after the Order issued. Viasat stated that it would deem the stay request denied if the Commission did not act by June 1, *i.e.*, a single business day after SpaceX’s opposition was due. Before any ruling, Viasat filed a stay motion in this Court on June 2.

## ARGUMENT

A stay pending judicial review is evaluated under the traditional four-factor test:

(1) whether the stay applicant has made a strong showing that [it] is likely to succeed on the merits; (2) whether the applicant will be irreparably injured absent a stay; (3) whether issuance of the stay will substantially injure the other parties interested in the proceeding; and (4) where the public interest lies.

*Nken v. Holder*, 556 U.S. 418, 434 (2009). Viasat’s request “fails every prong of the showing required to obtain the extraordinary relief of a stay pending appeal” and should be denied. *Citizens for Resp. & Ethics in Wash. v. Federal Election Comm’n*, 904 F.3d 1014, 1017 (D.C. Cir. 2018) (per curiam).

### **A. Viasat Is Unlikely To Succeed On The Merits**

Viasat’s novel claim that the Commission erred in declining to conduct an EA under NEPA for SpaceX’s modification has no likelihood of success.

*1. Viasat must overcome an undisputed categorical exclusion from further environmental processing.*

Viasat’s merits arguments are grounded in a mistaken understanding of the NEPA framework for categorically excluded actions. Under generally applicable NEPA regulations promulgated by the Council on Environmental Quality, “[f]or efficiency, agencies shall identify in their agency NEPA procedures \*\*\* categories of actions that normally do not have a significant effect on the human environment, and therefore do not require preparation of an environmental assessment or

environmental impact statement.” 40 C.F.R. § 1501.4(a). “If an agency determines that a categorical exclusion identified in its agency NEPA procedures covers a proposed action, the agency *shall evaluate the action for extraordinary circumstances* in which a normally excluded action may have *a significant effect*.” *Id.* § 1501.4(b) (emphases added).

The Commission has promulgated such categorical exclusions, *see* 47 C.F.R. § 1.1306, which undisputedly cover satellite licensing, *see* Mot. 5. Accordingly, to prevail on a NEPA claim, Viasat had to convince the Commission to deviate from the categorical exclusion by “setting forth in detail the reasons justifying or circumstances necessitating environmental consideration in the decision-making process.” 47 C.F.R. § 1.1307(c). As part of that showing, Viasat was required to demonstrate “that the action may have a significant environmental impact,” *id.*, and that “extraordinary circumstances” justify NEPA review of that categorically excluded action, 40 C.F.R. § 1501.4(b). *See City of New York v. ICC*, 4 F.3d 181, 185-186 (2d Cir. 1993) (denying NEPA challenge where action did not “have a significant environmental impact, *much less* amount to extraordinary circumstances”) (emphasis added).

The application of a categorical exclusion is *not*, as Viasat repeatedly insists, a “refus[al] to conduct *any* environmental assessment” or a determination that “no NEPA review was needed.” Mot. 7-8, 17. This Court has emphasized that

“[c]ategorical exclusions are not exemptions or waivers of NEPA review; they are simply one type of NEPA review.” *United Keetoowah Band of Cherokee Indians v. FCC*, 933 F.3d 728, 735 (D.C. Cir. 2019). Both the agency’s decision to invoke the categorical exclusion, as well as the decision whether to override the exclusion, are “entitled to substantial deference.” *City of New York*, 4 F.3d at 186; *see National Tr. for Historic Pres. in U.S. v. Dole*, 828 F.2d 776, 781 (D.C. Cir. 1987) (per curiam).

The Commission here ultimately saw no need to reach the issue of “extraordinary circumstances”—not to mention “whether NEPA applies to the novel issues raised by Viasat” regarding potential impacts in space—because Viasat could not show that the modification “may have a significant environmental impact.” Order ¶¶ 76-77 & n.308.

2. *Viasat’s assertions of significant environmental impact based on 2,824 satellites depart from its arguments to the Commission.*

Before the Commission, Viasat tethered its claims of significant environmental impact to a much larger satellite constellation than just the 2,824 satellites it complains about here. Viasat argued that SpaceX’s modification “cannot be considered ‘in isolation’ because SpaceX has authorization for about 12,000 satellites already and has also requested authorization for a second generation constellation of 30,000 satellites”—with replacement satellites bringing the total to “100,000 satellites over the next fifteen years.” Order ¶ 78 & n.311. Indeed, Viasat took the position that “[a] proper NEPA inquiry in this case requires the Commission

to consider whether permitting SpaceX to deploy 2,814 new satellites (plus replacements) into low-Earth orbit—as part of a broader plan to deploy an unprecedented fleet of 42,000 operating satellites ‘may have a significant environmental impact.’” A311 (emphasis added); see A316-317.

The Commission rightly rejected that grossly inflated baseline. Order ¶ 78. Even putting aside that the vast majority of those satellites have not yet been authorized, the Commission’s NEPA regulations focus the inquiry on “whether the ‘particular action’ at issue”—here, “the instant modification request”—“should be subject to an EA.” *Id.* (quoting 47 C.F.R. § 1.1307(c)). That makes sense where, as here, a categorical exclusion applies: “By definition, CE’s [categorical exclusions] are categories of actions that have been predetermined not to involve significant environmental impacts, and therefore require no further agency analysis absent extraordinary circumstances” that would justify a departure in a specific circumstance. *City of New York*, 4 F.3d at 185 (alteration in original) (quoting *National Tr.*, 828 F.2d at 781). Accordingly, “[t]he regulatory touchstone for exceptions to the categorical exclusion \*\*\* is the potential environmental impact of the ‘particular action’ before the agency \*\*\* . The environmental impact of that action did not increase because of prior Commission authorizations.” *Id.*

Undeterred, Viasat again keyed its stay request to the Commission to a hypothetical “mega-constellation \*\*\* ultimately comprising more than 42,000

operating satellites.” FCC Stay Request 1-2, 5. But now Viasat pivots to the much narrower argument that a small fraction (2,824 satellites) would still have a significant environmental effect. That is too little, too late: Viasat must live with the strategic choice it made before the Commission.

3. *Viasat seeks to render toothless the NEPA standard for overcoming a categorical exclusion.*

Unable to prevail under existing NEPA standards, Viasat attempts to water them down. *American Bird Conservancy, Inc. v. FCC* does not aid its effort. In that case, the Commission declined to prepare a programmatic environmental impact statement to assess the effect of communications towers on migratory birds in the Gulf Coast region. This Court vacated that decision on the ground that the Commission should have prepared at least a less-rigorous EA. In particular, the Court took issue with the Commission’s “demand for definitive evidence of significant effects” or “scientific consensus” as “a precondition to NEPA action” under the “may have a significant environmental impact” standard, and ultimately found that, “[b]ased on the record before the court, there is no real dispute that towers ‘may’ have significant environmental impact.” 516 F.3d 1027, 1033 (D.C. Cir. 2008).

By contrast, the Commission here did not demand “definitive evidence” or “scientific consensus” in support of Viasat’s NEPA petition. Instead, the Commission—proceeding under the “may have a significant environmental impact”



standard (without requiring a separate showing of “extraordinary circumstances”)—rendered a record-specific finding “that the issues raised in the filings do not warrant preparation of an EA.” Order ¶¶ 75, 77 & n.308.

Viasat nonetheless divines from *American Bird* the breathtaking proposition that “an EA is needed unless there is *no* possibility of a significant environmental impact.” Mot. 5; *see* Mot. 11 (advocating for “zero risk” standard). That proposition—nowhere to be found in *American Bird* or any statute, regulation, or precedent—would drastically expand the scope of NEPA and eviscerate the categorical exclusion process. Allegation of an infinitesimally small chance of environmental impact does not compel an EA—least of all where, as here, the agency has promulgated a categorical exclusion covering the activity.

To the contrary, NEPA regulations leave no doubt that it remains the Commission’s purview to assess the “significan[ce]” of any alleged impact in view of “considerations of both context and intensity,” including whether “possible effects on the human environment are highly uncertain” so as to warrant an EA notwithstanding a categorical exclusion. 40 C.F.R. § 1508.27(b)(5). “Some quotient of uncertainty \*\*\* is always present when making predictions about the natural world,” and hence courts applying a deferential standard have upheld decisions not to undertake further environmental processing under NEPA “despite some

uncertainty.” *American Wild Horses Campaign v. Bernhardt*, 963 F.3d 1001, 1008-1009 (9th Cir. 2020) (ellipsis in original) (internal quotation marks omitted).

4. *Viasat cannot surmount the deferential standard of review.*

Viasat’s remaining likelihood-of-success arguments boil down to the assertion that the Commission overlooked certain arguments or addressed them only cursorily. The Commission’s ten-page NEPA analysis—laying out the NEPA framework before discussing each of the alleged environmental impacts in separate subsections—easily passes muster under the deferential standard of review.

*First*, Viasat’s allegations about chemicals from satellite launch and entry—in addition to being “insufficient” or “too vague” under the Commission’s rules, Order ¶ 82—are refuted by the record. Viasat concedes that the Commission relied on the FAA’s July 2020 EA of SpaceX’s proposed increase in launch rates in concluding that “no additional consideration of potential impacts associated with those launches is required.” *Id.* ¶¶ 81-82. In addition, “an assessment of launch operations at Kennedy Space Center indicates that the SpaceX Falcon 9 launch vehicle does not emit any aluminum oxide whatsoever.” *Id.* ¶ 81. Even in an unrealistic worst-case scenario, where all the aluminum in a Starlink satellite converts to alumina during reentry (a fiction, as alumina is 52% mass-fraction aluminum), deorbiting SpaceX’s entire constellation of 4,408 satellites would create

only ~0.5% the amount of alumina as the metals naturally generated by meteorites entering the Earth's atmosphere in a single year. A394.

*Second*, Viasat argues that the Commission “did not consider the potential harm from satellites and satellite debris that does *not* fully burn up in the atmosphere.” Mot. 12. Not so. The Commission explained—under a section entitled “Satellite Debris Surviving Reentry,” no less—that the agency had “previously assessed the casualty risk associated with the SpaceX satellites” (which it found to be “roughly zero”) and that “there is no material difference between those satellites and the ones under consideration here.” Order ¶¶ 84-85. Viasat cannot establish a likelihood of success on appeal by, for example, contesting the Commission's finding—“sufficiently supported by the record”—that SpaceX's “satellites are designed to demise upon reentry into Earth's atmosphere.” *Id.* ¶ 85.

*Third*, Viasat's arguments relating to light pollution and astronomical interference fare no better. Viasat faults the Commission for relying on SpaceX's efforts to mitigate any environmental impacts by taking a variety of steps to reduce reflectivity, darken satellites, and coordinate with astronomers. Mot. 14-15; *see* Order ¶¶ 86-87. Viasat, however, overlooks that mitigation is itself an accepted rationale for finding no significant environmental impact under NEPA. *See* 40 C.F.R. § 1501.4(b)(1) (“If an extraordinary circumstance is present, the agency nevertheless may categorically exclude the proposed action if the agency determines

that there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects.”). Courts have upheld decisions *not* to prepare an EA (or an environmental impact statement) precisely for that reason. *E.g., Alaska Ctr. for Env’t v. U.S. Forest Serv.*, 189 F.3d 851, 859-860 (9th Cir. 1999) (affirming decision not to prepare EA because “conditions mitigating the environmental consequences of an action may justify an agency’s decision” and “[t]he mere presence of mitigating measures will not trigger the need to prepare an EA or EIS”).

*Fourth*, Viasat (again) seeks to transform its challenge to SpaceX’s orbital debris mitigation plan into a NEPA issue. Mot. 15-17. As the Commission noted, it is unclear how “impacts in space are even within the scope of NEPA (which applies to effects on the quality of the human environment).” Order ¶ 89. But it is not difficult to appreciate why the Commission concluded that Viasat failed to discharge its burden regardless. The Commission has a well-developed regime specifically designed to address orbital debris mitigation concerns that was updated just last year. *See In re Mitigation of Orbital Debris in the New Space Age*, 35 FCC Rcd. 4,156 (2020). A NEPA argument that orbital debris—despite SpaceX’s compliance with an agency-approved mitigation plan—may have a significant environmental impact on “humanity’s ability to explore and develop space” and may cause “economic harm,” Order ¶ 89, has no prospect of success on appeal.

## **B. Viasat Will Not Be Irreparably Harmed In The Absence Of A Stay**

Viasat also fails to establish that, absent a stay pending appeal, the Order will cause Viasat irreparable harm—a crucial factor that, if not established, may “dispose[] of th[e] motion” on its own. *Wisconsin Gas Co. v. FERC*, 758 F.2d 669, 674 (D.C. Cir. 1985). For harm to be irreparable, “several well known and indisputable principles” apply. *Id.* “First, the injury must be both certain and great; it must be actual and not theoretical,” such that “[t]he injury complained of [is] of such *imminence* that there is a clear and present need for equitable relief to prevent irreparable harm.” *Id.* (alterations in original) (internal quotation marks omitted). Next, “economic loss does not, in and of itself, constitute irreparable harm.” *Id.* Finally, “[i]mplicit in each of these principles is the further requirement that the movant substantiate the claim that irreparable injury is ‘likely’ to occur,” either through “proof that the harm has occurred in the past and is likely to occur again, or proof indicating that the harm is certain to occur in the near future.” *Id.*

Viasat (unabashedly) points to three ordinary economic and competitive harms that, aside from being speculative and refuted,<sup>1</sup> do not even make Viasat a

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<sup>1</sup> See Order ¶¶ 53-68, 84-85, 89 (rejecting orbital debris challenges); *id.* ¶¶ 65-66 (“[N]othing in our grant will prevent physical sharing of low-earth orbit.”). Notably, Viasat’s declaration (A478-503)—despite spanning 42 paragraphs and 26 pages—hardly addresses its alleged harm pending appeal. Instead, the declaration focuses on (inaccurate) technical points that improperly attempt to supplement the agency record, including by citation to materials that postdate the Order.

suitable NEPA challenger. *See Realty Income Tr. v. Eckerd*, 564 F.2d 447, 452 (D.C. Cir. 1977) (“Certainly an allegation of injury to monetary interest alone may not bring a party within the zone of environmental interests as contemplated by NEPA for purposes of standing.”). *A fortiori* such harms are easily rejected as justification for the extraordinary remedy of a stay pending appeal.

First, Viasat asserts that there would be an increased risk of collision for the *single satellite* that Viasat operates at the same altitude as Starlink, and an increase in “the costs and complexity of Viasat’s upcoming deployment[]” of another satellite that *might* launch “in the next six-to-twelve months.” Mot. 18-19. Second, along the same lines, Viasat claims that a “more crowded orbital environment” requires Viasat to expend “time and resources” to avoid collisions. Mot. 19. Third, Viasat declares that it will suffer “competitive injury” insofar as “Starlink poses a hazard to Viasat’s profits.” Mot. 20 & n.1. None of those overblown allegations—the best that Viasat can muster—is in the ballpark of irreparable harm. “Mere injuries, however substantial, in terms of money, time and energy necessarily expended in the absence of a stay are not enough.” *Wisconsin Gas*, 758 F.2d at 674; *see Washington Metro. Area Transit Comm’n v. Holiday Tours, Inc.*, 559 F.2d 841, 843 n.3 (D.C. Cir. 1977).

That is especially true because, as with its merits arguments, Viasat predicates its discussion of irreparable harm on the “deployment of many thousands of

satellites,” A487, and “unlimited” replacements, A486; Mot. 1, 6. The question here, however, is whether the satellites launched pursuant to the modification *pending appeal* will cause irreparable harm. SpaceX has steadily launched an average of two payloads of up to 60 satellites per month—a launch cadence it plans to continue through at least the end of 2021. Gibbs Decl. ¶¶ 7, 10. That means the number of satellites relevant to assessing harm for purposes of a stay is in the hundreds, not thousands. Viasat’s suggestion (Mot. 4, 22) of an expedited appeal, which SpaceX does not oppose, would lower that number even further.

Even taking the full 2,824-satellite figure, Viasat’s alarmist claims of collision risk and crowded orbits—already rejected by the Commission, *see* Order ¶¶ 54-60—lack appropriate context. The total volume of all 2,824 SpaceX satellites with conservative bounding spheres around them is just 0.000065% of the volume of space between the altitudes of 540 km and 570 km (~18.1 billion km<sup>3</sup>), *see* SpaceX Consol. Opp’n 6.

### **C. A Stay Would Cause Serious Harm To SpaceX**

Viasat’s argument that a stay would not harm SpaceX is obviously wrong. Starlink represents a massive devotion of time, money, and manpower—from up-front research and development, to manufacturing and deploying satellites, to manufacturing and distributing hundreds of thousands of user terminals, to constructing and operating ground stations. Gibbs Decl. ¶¶ 5-6. Among other

things, a stay would cause SpaceX to lose months of progress across nearly every facet of its nascent business, disrupt SpaceX's supply chain, and create imbalance between the size of SpaceX's workforce and the planned launch cadence. *Id.* ¶¶ 7-19. Those disruptions, in turn, risk serious long-term consequences for SpaceX's employees and vendors and for the provision of Starlink broadband service. *Id.* In short, a stay would frustrate SpaceX's ability to generate returns on its enormous investment. *Id.* ¶ 21.

Viasat's bald assertion (Mot. 21) that "the only effect of the stay would be to delay SpaceX's ability to launch satellites pursuant to the Order by some number of months" ignores the real-world context in which those satellite launches will occur. It is also belied by Viasat's own claims of irreparable harm: Viasat cannot claim that competitive injury to itself warrants a stay, while disregarding the more concrete injuries it seeks to foist on SpaceX.

#### **D. The Public Interest Tilts Sharply Against A Stay**

The Commission identified important reasons why granting the modification is in the public interest. The modification "has beneficial effects with respect to orbital debris mitigation" and will "improve service to remote and underserved areas." Order ¶¶ 12-13; *see id.* ¶ 9 (noting comment "urging the [agency] \*\*\* to allow SpaceX to begin deployment of its Starlink service in Alaska" because that would "finally bring ubiquitous internet connectivity within reach"). The Order thus



further the Commission's "top priority" to "take prompt and expeditious action to deliver on its goal of connecting all Americans, no matter where they live and work," for "[w]ithout access to broadband, rural communities cannot connect to the digital economy and the opportunities for better education, employment, healthcare, and civic and social engagement it provides." *In re Rural Digit. Opportunity Fund Connect Am. Fund*, 35 FCC Rcd. 686, 687 (2020). With every launch, SpaceX advances the Commission's goals by extending the reach and improving the capabilities of the Starlink constellation.

More broadly, a stay would impair U.S. strategic and competitive interests. The Air Force Research Lab has contracted with SpaceX to deliver Starlink service in the Arctic region this year. Gibbs Decl. ¶ 20. And foreign-licensed systems—that, like Viasat, claim not to be subject to similar U.S. regulatory oversight or NEPA—would cut into SpaceX's and other U.S.-licensees' valuable lead in satellite deployment. *Id.* ¶ 13.

In the face of that considerable public interest, Viasat points to the same speculative environmental harms the Commission has already found to be insubstantial or unsubstantiated. They fare no better as support for extraordinary stay relief. In the unlikely event an ultimate decision on appeal goes so far as to require deorbiting Starlink satellites, such action would redress many of the alleged environmental harms including light pollution, radiofrequency interference, and

orbital debris. Viasat does not even attempt to substantiate global warming or other impacts in terms of the limited number of satellites that will be launched during this (expedited) appeal—presumably because any resulting effects would be *de minimis*. See pp. 14-15, *supra*.

Viasat instead resorts to arguing (Mot. 22) that the “compelling public interest in the enforcement of NEPA” entitles it to a “presumption” of injunctive relief. But its cited authorities do not support the notion that NEPA challengers have special ability to obtain stay-pending-appeal relief in every case. In *Realty Income Trust*, the NEPA challenger “sought no interim relief from this court, by way of motions for summary reversal or injunction pending appeal”; thus, this Court’s statement regarding a presumption was limited to the “remedy” for an *adjudicated* NEPA violation. 564 F.2d at 452. Indeed, this Court underscored that “courts will not issue injunctions under NEPA only as prophylactic \*\*\* measures.” *Id.* at 456. Although Viasat points to *Cuomo v. U.S. Nuclear Regulatory Commission* for the proposition that “a presumption \*\*\* applies equally to stays of agency action,” Mot. 22, the Court there underscored the need to conduct a “particularized analysis” and ultimately *rejected* the stay request because “[t]he NEPA violation \*\*\* ha[d] not been clearly established, as should be done in order to justify injunctive relief,” 772 F.2d 972, 976 (D.C. Cir. 1985) (citation omitted).

Here, the NEPA claim has been adjudicated once, but (for all the reasons explained in Part A, *supra*) it was rejected. Viasat's decision to seek judicial review does not flip the presumption against the extraordinary remedy of a stay pending appeal.

### CONCLUSION

This Court should deny the motion for a stay pending judicial review.

Respectfully submitted,

/s/Pratik A. Shah

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*Counsel for Space Exploration  
Holdings, LLC*

June 14, 2021

**CERTIFICATE OF COMPLIANCE**

The foregoing opposition is in 14-point Times New Roman proportional font and contains 5,161 words, and thus complies with Federal Rule of Appellate Procedure 27(d)(1)-(2).

*/s/Pratik A. Shah*

Pratik A. Shah

**Exhibit A: Declaration of Samuel Gibbs IV**

**IN THE UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

Viasat, Inc.,

Appellant,

v.

Federal Communications Commission,

Appellee.

Nos. 21-1123, 21-1125

**DECLARATION OF SAMUEL GIBBS IV**

I, Samuel Gibbs IV, pursuant to 28 U.S.C. § 1746, hereby declare under penalty of perjury:

1. I am the Vice President of Starlink Business Operations, Global Licensing and Regulations at Space Exploration Technologies Corp., the parent company of Intervenor Space Exploration Holdings, LLC (“SpaceX”).

2. In my capacity as VP of Starlink Business Operations, Global Licensing and Regulations, I am responsible for supply chain, production, logistics, market access and customer support.

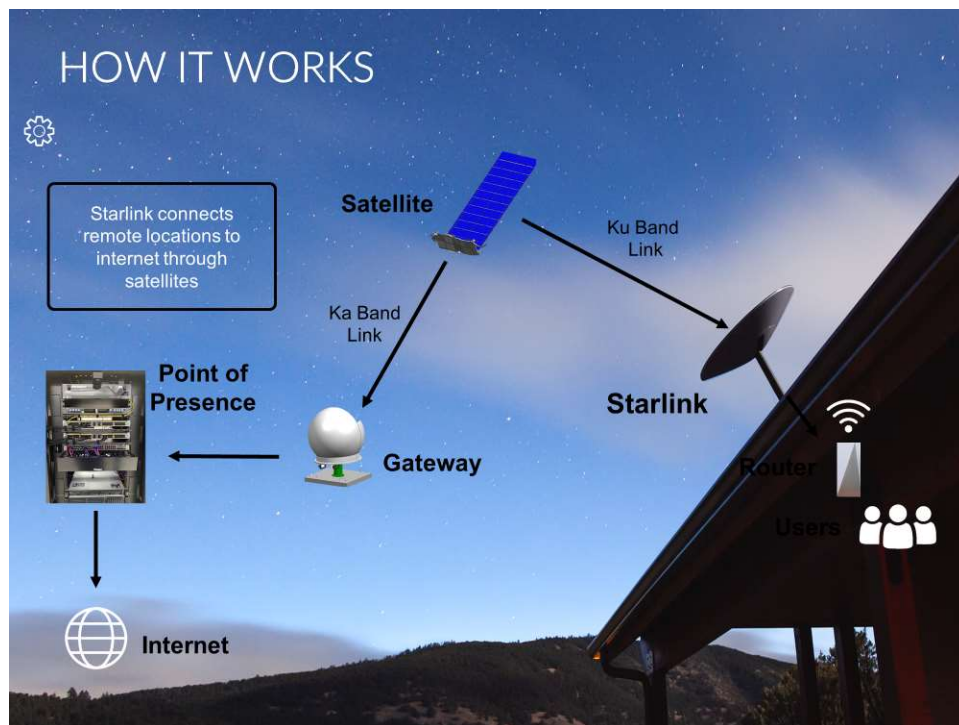
3. In particular, I work closely with our supply base to ensure that we are developing the capabilities and capacity needed to meet our forecasted expansion over the next 12 to 24 months. I also am involved in planning internal production team size and shift patterns, which require advanced planning and impact on our labor needs. I also lead our market access organization which gives me insights into

how the Starlink product is positioned in the market and the distinct advantage that is gained by bringing service to market quickly. Finally, leading the customer support organization involves understanding our customers' wants and needs, including the speed with which we can provide our service.

4. I am aware that the Federal Communications Commission ("FCC") issued an order (the "Order") granting SpaceX's request to modify its constellation of Starlink satellites by lowering 2,824 previously licensed satellites from altitudes between 1,110 km and 1,325 km to altitudes between 540 km and 570 km. I am also aware that Viasat has appealed the Order to the U.S. Court of Appeals for the District of Columbia Circuit and has asked the court to stay the effectiveness of the Order pending this appeal. I understand that if Viasat's motion were granted and the requested stay put into place, it would likely be in place for approximately 4 to 12 months, during which period SpaceX might not be able to launch Starlink satellites, but that the stay would not prevent others—including Viasat—whose satellites are not licensed by the United States from continuing to launch satellites in support of competing constellations.

5. Starlink is a high-speed, low-latency satellite internet service. In basic terms, Starlink uses a constellation of satellites in low Earth orbit (LEO), a network of larger antennas ("gateways" or "ground stations") that are connected to the global internet backbone, and antennas and routers at each user location ("user terminals")

to transmit from the user to the internet backbone. It functions largely the same way as wire-, cable-, or fiber-based internet services except that data is transmitted over the “last mile” to and from the user by transmitting data from the gateway up to the satellites and back down to the user’s Starlink user terminal and vice versa. This diagram illustrates the system:



6. To date, SpaceX has invested billions of dollars into its Starlink business. Among many other things, this investment includes designing, testing, and manufacturing satellites, user terminals, and ground stations; launching satellites into orbit; and developing ground station sites around the world.

7. SpaceX currently places its Starlink satellites into orbit using its Falcon 9 launch vehicle. Each Falcon 9 can carry up to 60 Starlink satellites to LEO, where



it deploys them all at once. Following deployment, it takes approximately three to four months for the satellites to separate and reach their designated location within the Starlink constellation. SpaceX is currently licensed to maintain and operate 4,408 Starlink satellites at altitudes ranging from 540 km to 570 km. SpaceX currently has some 1662 Starlink satellites in orbit, some of which are still making their way to their ultimate intended orbits.

8. SpaceX plans to generate a return on its investment by selling broadband services provided using its satellite constellation, gateways, and user terminals.

9. The more of the authorized 4,408 satellites that are in their intended orbits and operating, the larger the geographical area Starlink can serve and the more throughput Starlink can provide within that geographical area, which enables Starlink to serve more customers within that area. Put another way, every additional Starlink satellite that is inserted into the authorized constellation enhances SpaceX's ability to sell high quality internet service to more people in more places. SpaceX's ability to generate a return on its investment thus depends directly on the number of Starlink satellites that are operating on orbit in the authorized constellation.

10. The next launch of Starlink satellites is currently scheduled to occur on July 12, 2021, followed by a scheduled launch on July 30, 2021, and after that SpaceX has an average of two Starlink launches per month planned for the rest of

2021. SpaceX plans its Starlink launches more than a year in advance. It did not increase its launch rate in response to Viasat's litigation efforts.

11. Hundreds of SpaceX employees work manufacturing Starlink satellites and user terminals, and hundreds more work on manufacturing, launching, recovering, and refurbishing Falcon 9 rockets.

12. SpaceX procures the parts and materials required to manufacture Starlink satellites and user terminals from hundreds of vendors. SpaceX also procures the parts and materials required to manufacture and refurbish its Falcon 9 rockets from hundreds of vendors. Many of SpaceX's vendors are small American businesses.

13. I am aware that various sophisticated and well-funded companies are pursuing or have stated their intention to pursue LEO satellite constellations that compete, or will soon compete, with Starlink. These include OneWeb (owned by the UK government, Bharti Enterprises, Softbank, and Hughes Network Systems), Telesat, Amazon's Kuiper, Viasat, and others. I am also aware that the People's Republic of China and the European Union are developing LEO constellations to provide broadband internet services. In addition, Starlink faces direct competition from companies currently using medium earth orbit and/or geostationary satellites to provide satellite broadband internet services, including Hughes Network Systems,

Viasat, Telesat, and others, and also from companies that offer internet using cellular networks and terrestrial cabling.

14. Given the intense competition in the broadband internet services market generally, and the fast growing competition among companies and governments seeking to deliver broadband services using satellite in particular, SpaceX considers it extremely valuable to get the Starlink constellation in place and offer Starlink services to the broadest possible market as quickly as possible.

15. The imposition of a stay impairing SpaceX's ability to place more Starlink satellites into orbit for 4 to 12 months would have significant consequences for SpaceX. It is worth noting that the delay likely to be created by such a stay would be longer than the stay itself because (i) SpaceX needs time to plan and schedule launches for Starlink satellites, and (ii) it takes several months following initial injection into orbit for Starlink satellites to reach their final planned orbits within the constellation.

16. By delaying completion of the Starlink constellation, the stay would delay SpaceX's ability to access geographical markets and limit the number of users it can serve with those markets, resulting in delayed and likely lost sales.

17. Conversely, the delay caused by the requested stay would give our competitors—especially but not exclusively other satellite internet providers like

Viasat—an unfair advantage in retaining or capturing customers to whom the stay would delay us from offering service or providing higher quality service.

18. SpaceX invests in capital and hires employees based on its current business plans, which include making and launching some 120 Starlink satellites and thousands of user terminals a month. A 4 to 12 month delay resulting from the requested stay would commensurately delay the need for SpaceX to manufacture hundreds to thousands of satellites and tens of thousands of Starlink user terminals, as well as the need for many Falcon 9 launches. The delay would thus idle both labor and capital that represent large SpaceX investments.

19. A stay would force SpaceX to delay orders from vendors that supply our launch and satellite businesses. I believe this would have a serious, in some cases possibly devastating, impact on these vendors and their employees (for many of them, just as they are trying to recover from a global pandemic).

20. SpaceX is currently under contract with the Air Force Research Lab (AFRL) to deliver Starlink satellite internet services in the Arctic region with service in 2021. Meeting this commitment requires deployment of additional Starlink satellites under the modified license, and a delay of SpaceX's Starlink launch schedule would delay AFRL's ability to use Starlink internet.

21. The impacts stated above, individually and collectively, would impact SpaceX's ability to achieve its expected financial returns on its investment. They would also harm SpaceX's vendors and their employees.

I declare under penalty of perjury that the foregoing is true and correct.

June 14, 2021

A handwritten signature in black ink, appearing to read "Samuel Gibbs IV". The signature is fluid and cursive, with a horizontal line underneath the name.

Samuel Gibbs IV

VP, Starlink Business Operations, Global Licensing and Regulations

**CERTIFICATE OF SERVICE**

I hereby certify that on June 14, 2021, I electronically filed the foregoing with the Clerk of the Court of the U.S. Court of Appeals for the District of Columbia using the appellate CM/ECF system.

/s/ Pratik A. Shah  
Pratik A. Shah