

§ 165.T05–0136 Safety Zone, Installation Area for Offshore Wind Power Transmission Export Cables, Atlantic Ocean, Virginia Beach, Virginia.

(a) *Location.* The following area is a safety zone: All waters within 550 yards of the center point of the installation site at position 36°48'57.6" N 75°57'43.2" W to include the shoreline within the radius. These coordinates are based on WGS 84.

(b) *Definitions.* As used in this section, *designated representative* means a Coast Guard coxswain, petty officer, or other officer operating a Coast Guard vessel and a Federal, State, and local officer designated by or assisting the Captain of the Port Sector Virginia (COTP) in the enforcement of the safety zones. The term also includes the masters of the Lift Boats RAM XII and/or RAM XV, for the sole purpose of designating and establishing safe transit corridors, to permit passage into or through these safety zones, or to notify vessels and individuals that they have entered a safety zone and are required to depart immediately.

(c) *Regulations.* (1) Under the general safety zone regulations in subpart C of this part, no vessels or persons may enter the safety zone described in paragraph (a) of this section unless authorized by the COTP or the COTP's designated representative.

(2) To seek permission to enter, vessels should contact the Lift Boats RAM XII and/or RAM XV via VHF–FM Channel 16. Those in the safety zone must comply with all lawful orders or directions given to them by the COTP or the COTP's designated representative for the purposes of instructions for safe transit.

(d) *Enforcement period.* This zone will be in effect and subject to enforcement during such times as the Lift Boats RAM XII and/or RAM XV is present within the zone, between March 1, 2024, and December 31, 2024.

Dated: February 14, 2024.

J.A. Stockwell,

Captain, U.S. Coast Guard, Captain of the Port Sector Virginia.

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 5, 25, and 97

[**IB Docket No. 18–313; FCC 24–6; FR ID 202994**]

Mitigation of Orbital Debris in the New Space Age

AGENCY: Federal Communications Commission.

ACTION: Denial of reconsideration.

SUMMARY: In this document, the Federal Communications Commission (Commission or FCC) discusses the adoption of an Order on Reconsideration (*Orbital Debris Reconsideration Order*), which addressed three petitions for reconsideration challenging the orbital debris mitigation rules adopted by the Commission in 2020. In the *Orbital Debris Reconsideration Order*, the Commission declined to modify, withdraw, or otherwise change the orbital debris mitigation rules adopted in *2020 Orbital Debris Order*, published August 25, 2020, but also provided some clarification and guidance as relevant for some of the issues raised in the petitions for reconsideration.

DATES: The denial of reconsideration is effective February 22, 2024.

FOR FURTHER INFORMATION CONTACT: Alexandra Horn, Space Bureau, Satellite Programs and Policy Division, 202–418–1376, alexandra.horn@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Order on Reconsideration (*Orbital Debris Reconsideration Order*), FCC 24–6, adopted on January 25, 2024, and released on January 26, 2024. The full text of this document is available at <https://docs.fcc.gov/public/attachments/FCC-24-6A1.pdf>. To request materials in accessible formats for people with disabilities, send an email to FCC504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

Paperwork Reduction Act. The *Orbital Debris Reconsideration Order* did not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. Therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4).

Regulatory Flexibility Analysis. The Regulatory Flexibility Act of 1980, as

amended (RFA), requires that a regulatory flexibility analysis be prepared for notice and comment rulemaking proceedings. As the *Orbital Debris Reconsideration Order* does not adopt or otherwise modify any existing rules, no regulatory flexibility analysis is necessary.

Synopsis

I. Introduction

1. In the *Orbital Debris Reconsideration Order*, the Commission addressed the issues raised in three petitions for reconsideration of the *2020 Orbital Debris Order*, 86 FR 52422 (August 25, 2020): (1) a petition filed by the Boeing Company (Boeing), EchoStar Satellite Services, LLC (EchoStar), Hughes Network Services, LLC (Hughes), Planet Labs, Inc. (Planet), Spire Global, Inc. (Spire), and Telesat Canada (Telesat) (collectively, Combined Petition), asking the Commission to reconsider information disclosure requirements relating to satellite maneuverability, large system disposal reliability, the use of deployment devices, and the use of certain types of persistent liquids; (2) a petition filed by Space Exploration Technologies Corp. (SpaceX) seeking reconsideration or clarification of the Commission's orbital debris mitigation rules as applied to non-U.S.-licensed satellite systems seeking U.S. market access; and (3) a petition filed by Kuiper Systems LLC (Kuiper) seeking adoption of a new rule addressing issues related to the orbital separation of large non-geostationary orbit (NGSO) constellations.

2. In responding to these petitions, the Commission declined to modify, withdraw, or otherwise change the information collection requirements adopted in the *2020 Orbital Debris Order*. It also declined to change its rules as applicable to non-U.S.-licensed systems seeking U.S. market access, or to adopt new rules governing the orbital separation of large NGSO constellations. After reviewing the petitions, the Commission found that the petitioners failed to show any material errors or omissions in the *2020 Orbital Debris Order* or raise any new or additional facts that would warrant reconsideration under the Commission's rules. However, the *Orbital Debris Reconsideration Order* provided some clarification or guidance as appropriate on some of the issues raised in the petitions for reconsideration.

II. Background

3. On November 19, 2018, the Commission released a notice of

proposed rulemaking (*2018 Orbital Debris NPRM*), 84 FR 4742 (February 19, 2019), in IB Docket No. 18–313, concerning the mitigation of orbital debris in the new space age. It represented the first comprehensive look at the Commission's orbital debris rules since their adoption in 2004 and was intended to improve and clarify these rules based on the experiences gained in the satellite licensing process and various improvements in mitigation guidelines, practices, and technologies. After reviewing the record and public comments filed in response to the *2018 Orbital Debris NPRM*, including individual comments filed by some of the parties involved in the petitions for reconsideration, the Commission adopted the *2020 Orbital Debris Order* on April 23, 2020. At the same time, the Commission also adopted a further notice of proposed rulemaking, 85 FR 52455 (August 25, 2020) (*2020 Orbital Debris FNPRM*), which sought further comment on adopting rules concerning the probability of accidental explosions, the total probability of collisions with large objects, maneuverability above a certain altitude in low-Earth orbit (LEO), post-mission orbital lifetime, casualty risk, indemnification, and performance bonds for successful disposal. On September 24, 2020, the petitioners filed their timely petitions for reconsideration, and by November 24, 2020, five oppositions and comments to the petitions were filed.

III. Discussion

A. Combined Petition Issues

1. Relationship to Other U.S. Government Technical and Policy Documents

4. The petitioners raised concerns about the consistency of the rules adopted with policies and guidelines developed by expert Federal agencies, noting in particular the U.S. Government Orbital Debris Mitigation Standard Practices (ODMSP) and Space Policy Directive–3 (SPD–3), and allege that the disclosure rules “[diverge] substantially from the recommendations of other expert federal agencies, including, in some cases, disregarding the findings of the recently updated multi-agency Orbital Debris Mitigation Standard Practices.” Both Viasat and OneWeb challenged this assertion.

5. The petitioners failed to identify any respect in which the Commission's actions in adopting the *2020 Orbital Debris Order* are fundamentally inconsistent with the policies, goals, and guidelines identified in SPD–3 and the ODMSP. To the extent they are relying on the fact that the specific

technical matters addressed in the Commission's rules are not addressed at the same level of specificity in SPD–3 and the ODMSP, these arguments are not well-founded, and do not establish a “divergence.” As noted by Viasat and OneWeb, both of these documents invite further action including through the development of additional standards and best practices. The ODMSP expressly states that it may be appropriate to “consider the benefits of going beyond the standard practices and tak[ing] additional steps to limit the generation of orbital debris.” Furthermore, the Commission found the petitioners have in some instances alleged divergence from these documents only by ignoring other relevant provisions of those documents.

6. Even if the Commission were to accept the petitioners' unsupported allegation of divergence, the Commission observed in adopting these rules that the ODMSP “applies, by its terms, only to government missions that are procured and operated by government agencies for governmental purposes . . . rather than in the context of regulatory review,” and for that reason “some tailoring” of the ODMSP was necessary to fit into the Commission's existing regulatory structure.

2. Burden on Applicants

7. Throughout the Combined Petition, petitioners argued that the regulations adopted in the *2020 Orbital Debris Order* will be overly burdensome on applicants. Viasat and Maxar challenged this claim. In raising concerns with burdens on applicants, the petitioners rely on generalized concerns that regulation will be “overly stringent,” or that applicants will experience difficulties because of “staff conclusions that the substance of the disclosed information was insufficient or inconsistent with what they thought should be required.” These speculative concerns about possible errors in Commission decision-making do not provide a basis for reconsideration. In any event, and in an effort to assist applicants in preparing applications, the *Orbital Debris Reconsideration Order* offers additional discussion with respect to some aspects of the specific disclosure requirements adopted.

3. Maneuverability

8. In the *2020 Orbital Debris Order*, the Commission adopted a rule requiring applicants to disclose the extent of maneuverability of planned space stations, noting that most commenters addressing this topic, including the National Aeronautics and

Space Administration (NASA), agreed with the adoption of this disclosure. The Commission provided some examples of the type of information that applicants could include in their disclosure statements, as suggested by NASA in its comments on the topic.

9. The Commission also revised a separate rule provision on avoiding collisions with large objects to require applicants to state whether the probability that their spacecraft will collide with a large object during the orbital lifetime of the spacecraft is less than 0.001 (1 in 1,000), in line with the ODMSP. As part of that rule, the Commission adopted a presumption that the collision risk with large objects could be assumed zero or near zero during the period of time when the space station is able to conduct avoidance maneuvers, absent evidence to the contrary. The Commission noted that in individual cases where there is evidence that a particular system or operator is unable to effectively maneuver or is only maneuvering at a risk threshold that raises reasonable questions about its ability to meet the 0.001 collision risk threshold even with some degree of maneuverability, this assumption would not be applied and further analysis would be necessary. The Commission did not adopt a definition of “effective maneuverability” but sought comment in the *2020 Orbital Debris FNPRM* on a definition, as well as on whether to adopt a requirement that spacecraft must be maneuverable.

10. Boeing, Planet, and Spire argued that the Commission should withdraw its “requirements” regarding effective maneuverability until this term is adequately defined. These petitioners did not distinguish between the two distinct portions of the rule, and instead argued generally that without a more detailed metric for effective maneuverability, such as the ability to alter the course of a spacecraft by a certain distance in a particular time period, the FCC rules cannot be administered fairly. However, they did not take issue with the assumption of zero or near zero risk for maneuverable spacecraft. Viasat, OneWeb, and Maxar opposed this request, noting, in effect, that pending development of a comprehensive definition, disclosure of maneuverability information serves a valid public interest objective and provides supporting evidence for addressing the Commission's collision risk rule.

11. As observed in the *2020 Orbital Debris Order*, factual information regarding a satellite or system's maneuverability is useful not only to the

Commission when it is assessing applications, but to other operators as it helps interested parties to better understand how operators plan to handle predicted collision risks. Moreover, details about spacecraft maneuverability enhance the Commission's grasp of other data presented in an applicant's orbital debris mitigation plan and are essential information for the administration of Commission rules in several key areas. For example, the satellite's expected lifespan in orbit can be significantly influenced by its maneuverability and impact an operator's ability to comply with Commission rules. Additionally, the information provided by applicants in these disclosures can also be drawn upon as the Commission works to further refine its rules through rulemaking. As noted by opposing parties, "facilitating a thorough understanding of other operators' ability to maneuver in-orbit is fundamental to responsible orbital stewardship" and disclosure fosters a "transparent" and "predictable" operating environment.

12. Although the petitioners' request appears to focus on any disclosure concerning maneuverability, to the extent the petition sought only removal of the "not effectively maneuverable" exception to the zero or near zero collision risk assumption in the Commission's large object collision risk rule, the Commission found that the petitioners provided no valid arguments in support of this approach. The Commission declined to adopt an approach that could maintain an assumption of zero or near zero risk even in the face of evidence suggesting that such an assumption is not warranted because collision avoidance capabilities are minimal. The Commission expects the precedent that evolves from a case-by-case approach in evaluating factual information regarding a satellite or system's maneuverability will guide applicants and will address petitioners' concerns with subjective and inconsistent licensing determinations. Finding that the petitioners have not provided any evidence of a material error, omission, or reasoning that would warrant reconsideration under the Commission's rules, the Commission declined to modify its rules pertaining to maneuverability.

13. *Additional Resources for Applicants.* During the pendency of this proceeding, NASA developed the "NASA Spacecraft Conjunction Assessment and Collision Avoidance Best Practices Handbook" (Handbook) and issued a revised version in February of 2023. The Handbook is a useful

resource that applicants may find helpful in developing and documenting conjunction assessment and collision avoidance capabilities, including for maneuverable spacecraft. The Handbook makes some specific recommendations on conjunction assessment and collision avoidance, including (i) designing spacecraft with capabilities to facilitate conjunction assessment and mitigation; (ii) providing ephemeris for conjunction screening at adequate intervals and covering adequate duration; and (iii) when the probability of collision (P_c) estimated for a conjunction exceeds the mitigation threshold (recommended to be $1E-4$) at the mitigation action commitment point, pursuing a mitigation action that will reduce P_c by at least 1.5 orders of magnitude from the remediation threshold, and ensure that the mitigation action does not create any additional conjunctions with a P_c value above the mitigation threshold.

4. Large System Disposal Reliability

14. In the *2020 Orbital Debris Order*, the Commission adopted a rule requiring applicants to provide a statement demonstrating that the probability of success for their chosen disposal method is 0.9 or greater for any individual space station. The rule also requires that for space station systems consisting of multiple space stations, the demonstration should include additional information regarding efforts to achieve a higher probability of successful disposal, with a goal, for large systems, of a probability of success for any individual station of 0.99 or better. Drawing on provisions in the ODMSP, the Commission also stated in the *2020 Orbital Debris Order* that additional scrutiny will be given to larger deployments, including consideration of factors such as mass, collision probability, and orbital location.

15. Boeing, Planet, Spire, and Telesat raised a concern that the rule will result in the 0.99 probability goal for satellites that are part of large systems becoming in effect an enforceable requirement. They also objected to providing "sensitive" commercial considerations, such as satellite mass and orbital location, as part of the Commission's assessment.

16. The Commission found that the petitioners provided no valid basis for reconsideration. With respect to concerns that the 0.99 disposal reliability goal described in the adopted rule is in effect a firm requirement for all large deployments, these concerns are neither justified nor supported by any new information. Since the adoption of this rule, the Commission

has authorized several large system deployments, and in doing so has addressed reliability together with other relevant factual considerations, such as collision risk for satellites that are not reliably disposed. While it appears to be the case based on both authoritative studies and the experience gained in these decisions that the largest systems will require very high disposal reliability in order to avoid unacceptably high collision risks, the approach to disposal reliability discussed in the *2020 Orbital Debris Order* does not foreclose in individual cases the authorization of systems of satellites with individual satellite disposal reliability of less than 0.99. With respect to concerns raised about examination of "sensitive" information, the Commission noted that information such as orbital location and satellite mass (as a component of the area-to-mass ratio of the satellite, necessary for calculating residual orbital lifetime and related collision risk) are routinely provided as part of applications, and this information is routinely publicly available in the Commission's files. Orbital location is included in all licenses. To the extent examination of the orbital debris risks presented by a large constellation requires examination of information for which confidential treatment can be justified, the Commission's rules provide for such treatment. The Commission therefore does not consider these concerns as justifying reconsideration.

5. Deployment Devices

17. In the *2020 Orbital Debris Order*, the Commission modified a rule requiring applicants to provide a statement that the space station operator has assessed and limited the amount of debris released in a planned manner during normal operations to specifically require an orbital debris mitigation disclosure for any separate or "free-flying" deployment devices, distinct from the space launch vehicle, that may become a source of debris. The Commission also discussed in the *2020 Orbital Debris Order* the scope of any such disclosure, noting that it should address facts such as the orbital lifetime of the device and collision risks associated with the device itself, including an evaluation of collision risk specifically associated with the deployment of multiple satellites from a deployment device (e.g., re-contact analysis). The Commission stated that such disclosures would be largely assessed on a case-by-case basis, reasoning that this approach provides the flexibility necessary to address new developments in space station design

and addresses the difficulty of designing specific disclosure rules for each different type of device that may be used.

18. Boeing, Planet, Spire, EchoStar, and Hughes argued that this disclosure requirement should be replaced with the ODMSP standard, which specified that “[f]or all planned released debris larger than 5mm in any dimension, the total debris object-time product in low-Earth orbit . . . should be less than 100 object-years . . . per spacecraft.” They also argued that the Commission should not require re-contact risk analyses because no consensus exists on what is considered an adequate re-contact risk analysis, it was not proposed for comment in the *2018 Orbital Debris NPRM*, and there is not enough guidance as to how to conduct a re-contact analysis or how it would be used in the application review process.

The Commission found that the petitioners’ argument concerning the ODMSP provisions on operational debris relies on a selective reading of those provisions and does not justify reconsideration of the adopted rule. The sentence in the ODMSP immediately preceding the sentence that petitioners rely on states that “[e]ach instance of planned release of debris larger than 5 mm in any dimension that remains in orbit for more than 25 years *should be evaluated and justified.*” This additional wording would not be necessary if the rationale for this guideline is that any release of operational debris of less than 100 object-years should be routinely considered acceptable. Instead, as a condition precedent to applying the 100 object-year metric, this guideline contemplates a determination that the release is evaluated and justified. The approach adopted by the Commission is in no way inconsistent with this approach, which identifies a need, for example, to consider whether alternative methods for deployment might be utilized that do not result in the potential for debris generation.

19. With respect to the concerns raised about re-contact analysis, the Commission rejected the petitioner’s contention that there was insufficient notice to require a re-contact analysis, stating that the *2018 Orbital Debris NPRM* sought comment on the issue of the use of deployment devices and specifically proposed to require “information regarding the planned orbital debris mitigation measures specific to the deployment device, including the probability of collision associated with the deployment device itself.” A re-contact analysis addresses “the probability of collision associated

with the deployment device itself.” The Commission further noted that since adopting the *2020 Orbital Debris Order*, it has authorized multiple deployers on a case-by-case basis. Applicants provided information detailing the ways in which they plan to mitigate recontact and Commission assessment of each application took into account the specific re-contact mitigation measures and overall mission facts that were unique to each mission in order to condition the licenses accordingly. For example, one applicant provided a report using a high-fidelity approach based on a Monte Carlo analysis of deployment sequence in its application, using the current manifest as the worst-case scenario and incorporating the worst possible change in manifest subsequent to filing to demonstrate that the applicant had taken the relevant re-contact risks into account and the Commission conditioned their license to require the operator to utilize a deployment sequence that will reduce the probability of re-contact and ensure that the risk of re-contact specified in its application does not increase based on this analysis. Another applicant stated in its Orbital Debris Assessment Report (ODAR) that it would support at least three re-contact mitigation strategies for deployments from the spacecraft, including ensuring that each deployment group will be spaced apart by at least 90 minutes, or one full orbit, optimize deployment orientation and sequence to minimize re-contact, and use on-board propulsion as necessary to use for maneuvers to minimize the risk of re-contact, and the Commission conditioned the license to require the applicant to optimize customer spacecraft deployment orientation and sequence to minimize re-contact and utilize on-board propulsion as necessary for maneuvers to minimize the risk of re-contact as a result. Each analysis in these examples provides varying levels of specificity and detail concerning their respective re-contact analyses, but still offers important context for mission characteristics unique to each application.

20. As these examples demonstrate, applicants have been able to address these concerns by drawing on available information, and in some instances involving additional analysis and modeling. The Commission anticipates, based on this experience, that this case-by-case approach will continue to provide a flexible and workable framework for applicants. Accordingly, the Commission concluded that the petitioners’ assertions about potential difficulties in the licensing process have

not been realized and do not justify reconsideration of this particular rule.

6. Persistent Liquids

21. In the *2020 Orbital Debris Order*, the Commission updated its rules to require operators to submit a “statement that the space station operator has assessed and limited the probability, during and after completion of mission operations . . . of release of liquids that will persist in droplet form.” The Commission proposed this rule change in response to increasing interest in use by satellites (including small satellites) of alternative propellants and coolants, some of which due to their physical properties might persist in droplet form. The Commission noted specifically ionic liquids that would persist if released in droplet form by a deployed satellite and the substantial debris cloud that resulted from release of such droplets by Soviet-era satellite operation. At orbital speeds, such droplets can damage active spacecraft. The Commission noted its expectation that the orbital debris mitigation plan for any system using persistent liquids should address the measures taken, including design and testing, to eliminate the risk of release of liquids and to minimize risk from any unplanned release of liquids in droplet form.

22. The Combined Petition asserted that no evidence exists that the use of such liquids is growing in the United States’ space industry while at the same time raising a concern that the Commission did not provide enough guidance on how information about persistent liquids will be assessed. The Commission found that the petitioners did not provide a basis for reconsideration of the rule adopted or demonstrated how the current rule is unworkable. Contrary to their assertions, there have been license requests involving spacecraft that would utilize the types of ionic liquids that could persist in space if released in droplet form. Ionic liquids offer some benefits such as ease of on-ground handling as compared to the toxic volatiles often used for spacecraft propulsion, and so it is also possible that they may be more frequently utilized in the future. With respect to criteria to be applied in addressing instances in which use of ionic liquids is disclosed, the *2020 Orbital Debris Order* identified some considerations. In addition, under a case-by-case approach, the Commission may consider whether, if released, these debris objects would remain in orbit for only a short time, perhaps due to deployment and operation at low

altitudes such as those below inhabitable space stations, or whether there are other natural processes that result in dispersion of the droplets. Other potentially relevant considerations include whether containment of the liquid can be expected to be effective, established as appropriate by design, testing data, or flight heritage, and whether the propulsion system is shielded from micrometeoroid and debris strikes that might result in leakage. These considerations provide some examples of the types of information that might support a favorable public interest finding with respect to individual applications but are not intended as an exhaustive list.

7. “Case-by-Case” Approach

23. Petitioners raised concerns about a “case-by-case” approach for reviewing the information provided in response to disclosure requirements, and requested that all information disclosure requirements be coupled with guidance provided by the Commission regarding the manner in which the information can be used and any minimum operation or performance requirements that must be demonstrated in the disclosed information to warrant the grant of a satellite system authorization. SpaceX argued a “case-by-case” approach sets an inconsistent baseline for assessing orbital debris risk, and imposes inconsistent rules of the road. Viasat and OneWeb, in opposition, supported the use of case-by-case analysis. Viasat noted that case-by-case analysis is an indispensable part of the Commission’s licensing process and that it would make little sense for the Commission to withdraw its existing information disclosure requirements pending completion of its further work on additional orbital debris safety standards because doing so would deprive the Commission of critical information necessary to evaluate the orbital safety implications of NGSO systems. Viasat argued that the Commission is obligated to consider the information elicited by these rules in order to make a finding that the proposed operations are in the public interest, and that eliminating the information disclosure requirements adopted in the *2020 Orbital Debris Order* would be counter-productive by removing from the Commission’s rules useful guidance for applicants about information that is relevant in seeking a license, thereby increasing uncertainty. OneWeb supported case-by-case review, observing that in circumstances involving complex and quickly evolving technological debris mitigation

capabilities, such review is necessary in order to facilitate a safe space environment, but at the same time affords operators flexibility and avoids overly prescriptive regulations.

24. The added disclosure requirements provide factual information that is relevant in assessing an application and supporting a public interest determination. The Commission found that the petitioners do not allege that the factual information elicited by the new disclosure requirements would never reveal a substantial or disqualifying concern related to orbital debris, and disagreed with the petitioners’ contention that incorporating such disclosure requirements in the Commission’s rules will lead to “subjective” or “discretionary” decision-making. The characteristics of satellites or satellite systems can significantly vary across applications. These rules serve to ensure that the Commission has sufficient information to only grant those applications that would serve the public interest, and while the Commission recognizes the potential benefits of identifying specific metrics or including the same blanket requirements on all operators for various aspects of debris mitigation plans, such as providing certainty to applicants, the development of a specific, one-size-fits-all metric on a particular point or including blanket requirements that do not make sense in conjunction with specific satellite or satellite system characteristics, may in certain cases slow innovation by being overly prescriptive or otherwise fail to account for innovative aspects of a particular system design.

25. Moreover, for certain metrics, the Commission found in the *Orbital Debris Reconsideration Order* that it does not have a sufficient record to support a “one-size-fits-all” metric on this issue. But, the absence of a specific metric on a particular point does not foreclose the need to gather information and evaluate mitigation plans in light of the larger and well-recognized goals of U.S. Government policy in this area—ensuring the future of the commercial space industry by limiting the release of operational debris and avoiding fragmentation events, whether caused by explosions or collisions. The development of metrics and refinement of criteria for evaluating orbital debris mitigation plans is an active and ongoing process. While consideration of the development of a metric or comprehensive assessment method continues, the Commission elects to proceed incrementally and make fact-based decisions on individual applications on a case-by-case basis. As

noted in connection with several of the specific disclosure requirements to which petitioners objected, the case-by-case approach has successfully permitted the Commission to proceed with review and authorization in individual cases. Contrary to SpaceX’s argument that the case-by-case approach threatens space sustainability by imposing inconsistent rules of the road, experience with these cases, along with parallel developments in standards development, will inform future decision-making. In applying this case-by-case approach, the Commission is committed to ensuring consistency in application of its rules and to working with applicants to gather additional information as necessary to ensure that applicants are not penalized without a prior opportunity to address potential concerns. The Commission expects the precedent that evolves from a case-by-case approach will provide contours to guide applicants regarding the extent to which metrics or comprehensive methods may aid in facilitating a favorable Commission determination on pending applications. Finally, as part of the Space Bureau’s Transparency Initiative, the Commission directs the Space Bureau to highlight any developments arising from this case-by-case approach, providing additional guidance on orbital debris mitigation information disclosures.

B. SpaceX Petition—Market Access and Orbital Debris Mitigation Showings

26. In its petition, SpaceX requested that the Commission reconsiders allowing non-U.S.-licensed space stations to satisfy the orbital debris mitigation showing requirement by demonstrating that debris mitigation plans for the space station(s) for which U.S. market access is requested are subject to direct and effective regulatory oversight by the national licensing authority. Alternatively, SpaceX requested the Commission to explicitly delineate the information an applicant must submit with its application in support of such a demonstration or disclose where that information may be easily and publicly found. In particular, SpaceX urged the Commission to require applicants to include: (i) all materials related to orbital debris mitigation submitted to the foreign regulator in connection with an application for a space station authorization; and (ii) all authorizations that include conditions related to orbital debris mitigation.

27. In support, SpaceX argued that allowing non-U.S.-licensed systems to rely on the orbital debris mitigation requirements of other countries to meet

Commission requirements creates a “loophole” that could undermine the Commission’s space safety objectives by allowing operators to evade oversight by choosing forums with less stringent rules and little input from other affected satellite operators. In response, Kepler Communications Inc., OneWeb, and Viasat submitted oppositions and comments to the SpaceX petition, stating that there is no “loophole” in the Commission’s rules and in fact, based on their own experience as non-U.S.-licensed market access applicants, they have been subject to the same level of regulatory scrutiny as U.S.-licensed systems. The Commission agreed that the end result is the same whether a market access applicant makes an orbital debris mitigation showing under 47 CFR 25.114(d)(14)(i) through (iv) or (d)(14)(v) prior to gaining U.S. market access, the applicant will have had its orbital debris mitigation plan subject to a rigorous review to ensure space safety.

28. While Commission rules allow market access applicants to satisfy the requirement to describe the design and operational strategies to minimize orbital debris risk by demonstrating that their debris mitigation plans are subject to direct and effective regulatory oversight by the national authority that licensed their space station operations, such a showing requires market access applicants to provide supporting documentation and respond to inquiries from Commission staff in order for the staff to compare the non-U.S. regulatory regime, including its rules and ongoing oversight, and determine whether there is an effective regulatory regime in place. This information, when filed with the Commission, becomes a part of the record, and other interested parties are able to review it too. If the Commission finds additional information is necessary to complete its review, that information also becomes part of the record and available for review. In either case, interested parties will have access to the same information the Commission relies on to determine whether a grant of market access is in the public interest, the only exception being if the applicant is able to demonstrate an overriding public interest need to keep some of the information confidential.

29. Having a one-size-fits-all disclosure requirement as proposed by SpaceX can be more burdensome than necessary for the Commission to determine whether an applicant’s debris mitigation plan has been thoroughly reviewed and whether the applicant will be subject to effective regulatory oversight. Using a case-by-case approach provides more flexibility and

can serve the public interest better by being less burdensome. For instance, as Commission staff become familiar with the requirements and review process of a particular non-U.S. regulator, they can tailor their information request based on knowledge of how that regulator conducts an orbital debris mitigation review, and what regulatory requirements it imposes. The staff may ask for more information in an area that they have found the regulator does not require the same level of detail as the Commission, or may likewise ask for less information in another area where the Commission has already found sufficient regulatory oversight. In either case, if another party believes that circumstances have changed with a particular non-U.S. regulatory oversight process or has reason to believe that an applicant is not subject to sufficient regulatory oversight, they can raise those concerns with the Commission and the Commission will factor that in as part of its overall review process. Ultimately, if the Commission finds after its review of either the applicant’s mitigation plan or the non-U.S. regulatory regime under which it is licensed, that additional conditions are necessary to ensure space safety, the Commission can so condition the grant of market access, similar to what it does for U.S. licensees in similar situations. The Commission also notes that while it does accept “direct and effective” regulatory oversight showings under 47 CFR 25.114(d)(14)(v), that rule does not preclude applicants from providing the same basic orbital debris mitigation information provided by U.S. licensees, which are detailed in 47 CFR 25.114(d)(14)(i) through (iv). In fact, the provision of such information can support a showing of direct and effective regulatory oversight, particularly in instances where the information is provided to but not routinely made publicly available by the non-U.S. regulator. And, except for a few cases, applicants have generally found it preferable to just provide the Commission with a description of the design and operational strategies for orbital debris mitigation instead of presenting all of the showings necessary to demonstrate the effective regulatory oversight of another national authority. Accordingly, the Commission found SpaceX has not demonstrated a need for elimination or changes to 47 CFR 25.114(d)(14)(v).

C. Kuiper Petition—Orbital Separation of Large NGSO Systems

30. In the *2018 Orbital Debris NPRM* the Commission sought comment on whether it should adopt an upper limit

for variances in orbit for NGSO systems. After reviewing an extensive record on the issue, including comments on the related topic of whether, and how, the Commission should assign orbital altitude ranges for large constellations of NGSO satellites, in 2020 the Commission said it would not adopt a maximum orbital variance for NGSO systems, nor a required separation between orbital locations, and will instead continue to address these issues on a case-by-case basis. The Commission found that there were a wide range of considerations in such cases, and while it was concerned about the risk of collisions between the space stations of NGSO systems operating at similar orbital altitudes, it found that these concerns are best addressed in the first instance through inter-operator coordination.

31. Kuiper petitioned the Commission to reconsider its decision to not establish an orbital separation requirement, including for large NGSO constellations, and associated limits. Kuiper stated that the Commission should expressly require a later-filed large NGSO constellation to maintain sufficient orbital separation from an earlier-filed large NGSO constellation. In support, Kuiper stated that, since adoption of the *2020 Orbital Debris Order*, the Commission has received a number of applications and license modifications for large NGSO constellations to operate in orbits that are already occupied, or proposed to be occupied, by other large NGSO constellations. Therefore, Kuiper argued the Commission’s expectation that applicants’ own desire for space safety would lead them to voluntarily choose non-overlapping orbits has proven false, and these new applications constitute facts that did not exist at the time the Commission adopted its *2020 Orbital Debris Order* and therefore warrant reconsideration.

32. OneWeb, ARCLab, and Maxar filed comments in support of Kuiper’s petition. OneWeb argued that the time is ripe for the Commission to reconsider the potential for orbital separation rules to help ensure a safe space environment. ARCLab argued that operating large constellations with overlapping orbits sharply increases systemic risk, and if those orbits are not explicitly designed for compatibility it would result in sharp increases in conjunctions and collision avoidance maneuvers. Maxar added that since adoption of the *2020 Orbital Debris Order*, the increase of large constellations with overlapping orbital variances has become an issue of broad applicability and therefore ripe for Commission consideration.

33. Both Viasat and Kepler opposed Kuiper's petition, arguing that Kuiper's proposed rule would undermine the incentive for an operator to engage in the type of inter-system coordination anticipated by the *2020 Orbital Debris Order* and in essence create a first-come, first-serve priority system for orbital regions in LEO, which would advantage the largest, most established satellite operators, and potentially lead to a monopolization of certain sections of LEO. Viasat also stated that Kuiper has not established that an orbital overlap rule is necessary to promote space safety, and that there are alternative approaches the Commission could consider.

34. The Commission continues to take space safety issues seriously, and the *2020 Orbital Debris Order* recognized that issues may arise with respect to large NGSO systems, and the orbits at which they operate. Notably, the *2020 Orbital Debris Order* advises that applicants for large systems may be asked to provide specific information about their planned orbital variance as well as how their system operations would accommodate other spacecraft traveling through or operating in the same region. While Kuiper supported its petition with the "new" fact that applications for large NGSO systems with competing orbits have been filed since adoption of the *2020 Orbital Debris Order*, the Commission found that this circumstance alone is not sufficient justification for it to revisit its decision to allow in the first instance parties to work on an inter-operator coordination agreement. At the time the Commission adopted its *2020 Orbital Debris Order* it had already considered that parties may want to use similar orbits, but it also found that inter-operator coordination could resolve any space safety concerns, and no party has introduced evidence that any such concerns remain unresolved. The Commission has continued to monitor the situation since adoption of the *2020 Orbital Debris Order* and continues to believe that the best solution for maintaining space safety is for operators to have the flexibility to coordinate in a manner that works best for their situation, rather than have the Commission dictate how that coordination should proceed. In addition, the Commission reviews closely applications for new licenses or modifications that may raise overlapping orbital shell issues and works with the applicants and other interested parties to ensure that either coordination has occurred to minimize space safety issues, or changes are made

to the proposed operating parameters to address any remaining concerns. The Commission will continue to monitor the overall orbital separation environment, and to the extent it sees a breakdown in the coordination process or other space safety issues, it will consider at that time whether new general rules are needed to either improve the coordination process or address space safety concerns. Accordingly, the Commission declined to establish an orbital separation requirement, including for large NGSO constellations.

IV. Ordering Clauses

35. Accordingly, *it is ordered*, pursuant to 47 U.S.C. 151, 154(i), 154(j), 405, and 47 CFR 1.429(b) that the petitions for reconsideration filed by Boeing, EchoStar, Hughes, Planet, Spire, Telesat, SpaceX, and Kuiper in IB Docket No. 18–313, are *denied*.

36. *It is further ordered* that the *Orbital Debris Reconsideration Order* shall be effective upon publication in the **Federal Register**.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2024–03506 Filed 2–21–24; 8:45 am]

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GENERAL SERVICES ADMINISTRATION

48 CFR Parts 538 and 552

[GSAR Case 2020–G511; Docket No. GSA–GSAR–2023–0019; Sequence No. 1]

RIN 3090–AK21

General Services Administration Acquisition Regulation; Updated Guidance for Non-Federal Entities Access to Federal Supply Schedules

AGENCY: Office of Acquisition Policy, General Services Administration (GSA).

ACTION: Final rule.

SUMMARY: GSA is issuing this final rule amending the General Services Administration Acquisition Regulation (GSAR) to update and clarify the requirements for use of Federal Supply Schedule (FSS) contracts by eligible non-Federal entities, such as State and local governments.

DATES: Effective March 25, 2024.

FOR FURTHER INFORMATION CONTACT: For clarification of content, contact Mr. Thomas O'Linn, Procurement Analyst, at gsarpolicy@gsa.gov or 202–445–0390. For information pertaining to status or publication schedules, contact the

Regulatory Secretariat Division at GSARegSec@gsa.gov or 202–501–4755. Please cite GSAR Case 2020–G511.

SUPPLEMENTARY INFORMATION:

I. Background

This final rule amends the General Services Administration Acquisition Regulation (GSAR) to update and clarify the requirements for use of Federal Supply Schedule (FSS) contracts by eligible non-Federal entities, such as State and local governments. GSA published a proposed rule at 88 FR 63892 on September 18, 2023.

GSA conducts routine reviews of its acquisition regulations. Routine review of the GSAR, as well as feedback from GSA's operational offices, prompted this change. The review indicated a need to update and clarify GSAR subpart 538.70, Purchasing by Non-Federal Entities.

GSAR subpart 538.70 prescribes the policies and procedures that implement statutory, regulatory, and other provisions that authorize eligible non-Federal entities (e.g., State or local governments as defined in 40 U.S.C. 502(c)(3)) use of Federal Supply Schedule (FSS) contracts.

The GSA Schedule, also known as FSS, and Multiple Award Schedule (MAS), is a long-term governmentwide contract with commercial companies that provide access to millions of commercial products and services at fair and reasonable prices to the Federal Government and other authorized ordering activities.

This rule updates and clarifies GSAR subpart 538.70, which supports use of FSS contracts by eligible non-Federal entities. This subpart is being revised to make administrative changes due to changes in some of the underlying authorities supporting use of FSS contracts by eligible non-Federal entities. This rule also updates and clarifies existing requirements supporting use of FSS contracts by eligible non-Federal entities, adds additional key authorities that support such use, and makes additional technical corrections to enhance clarity of existing requirements.

II. Discussion and Analysis

A. Analysis of Public Comments

GSA provided the public a 60-day comment period (September 18, 2023, to November 17, 2023). There were no public comments submitted in response to the proposed rule. Minor changes were made from the proposed rule to the final rule.