

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Kuiper Systems LLC

Application to Amend Pending Application
to Modify Authorization for the Kuiper
System (Call Sign S3051)

SAT-AMD-_____

SAT-MOD-20230228-00043

APPLICATION FOR AMENDMENT OF PENDING MODIFICATION

Kuiper Systems LLC, a wholly owned subsidiary of Amazon.com Services LLC (collectively “Amazon”), pursuant to Sections 1.3 and 25.116 of the rules of the Federal Communications Commission (“FCC” or “Commission”),¹ hereby amends the above-captioned application to include a request for authority to conduct launch and early orbit phase (“LEOP”) operations, as well as deorbit operations, for its non-geostationary satellite orbit (“NGSO”) fixed-satellite service (“FSS”) and mobile-satellite service (“MSS”) constellation (the “Kuiper System”).²

I. AMENDMENT REQUEST

¹ 47 C.F.R. §§ 1.3, 25.116.

² Amazon has filed this amendment request electronically as an attachment to FCC Form 312. *See* 47 C.F.R. § 25.116(e). All other information previously provided to the Commission, including technical information on Schedule S, remains unchanged and is incorporated by reference. *See generally* Kuiper Systems LLC, Application for Modification of Authorization for the Kuiper System, File No. SAT-MOD-20230228-00043 (filed Feb. 28, 2023); *Kuiper Systems LLC, Application for Authority to Deploy and Operate a Ka-band Non-Geostationary Satellite Orbit System*, Order and Authorization, 35 FCC Rcd 8324 (2020) (“*Kuiper System Authorization*”).

On July 30, 2020, the Commission authorized Amazon to deploy the Kuiper System, a 3,236 satellite NGSO constellation, to provide service using certain FSS and MSS Ka-band frequencies.³ As the basis for that authorization, the Commission determined that Amazon’s system would expand the availability of high-speed broadband, thus serving the public interest.⁴ The Commission conditioned its authorization on Amazon providing a final orbital debris mitigation plan for the Kuiper System. Amazon submitted this plan as part of an earlier modification application, which the Commission subsequently granted.⁵ Paragraph 49 of the modified Kuiper System Authorization provides that “[d]uring launch and early orbit phase operations, payload testing, and deorbit of its satellites, Kuiper must operate on a non-harmful interference basis . . . and must accept any interference received.”⁶

To the extent that the Commission understands this provision of Kuiper’s modified license not to confer blanket LEOP and deorbit operations and testing authority, Amazon files this amendment application seeking such authority. Specifically, Amazon requests blanket authority in future Kuiper missions to conduct LEOP operations and testing prior to and during orbit raising and during the deorbit of any of its satellites. During LEOP, orbit raising, and deorbit phases, Amazon will perform telemetry, tracking, and command functions using its network of gateway earth stations and TT&C-specific earth stations. Amazon would conduct such operations only in

³ See generally *Kuiper System Authorization*.

⁴ *Id.* ¶ 3 (“We conclude that grant of Kuiper’s application would advance the public interest by authorizing a system designed to increase the availability of high-speed broadband service to consumers, government, and businesses.”).

⁵ Kuiper Systems LLC, Legal Narrative, File No. SAT-MOD-20211207-00186 (filed Dec. 7, 2021).

⁶ *Kuiper Systems LLC, Request for Modification of the Authorization for the Kuiper NGSO Satellite System*, Order and Authorization, DA 23-114, File No. SAT-MOD-20211207-00186, ¶49 (rel. Feb. 8, 2023). Despite this language, the Order and Authorization does not specifically grant Amazon authority to conduct LEOP and deorbit operations.

frequencies already authorized in the *Kuiper System Authorization*, and would ensure that such operations are consistent with the terms and conditions of that authorization.

In addition, consistent with the above-quoted provision in Paragraph 49 of Kuiper’s modified license, Amazon will operate on a non-interference, non-protected basis with respect to any LEOP or deorbit operations.⁷ Amazon will also take all practicable steps to ensure safe operation of its spacecraft and avoid causing harmful interference. In the unlikely event that harmful interference occurs, Amazon will take all necessary steps to eliminate the interference. Should an issue arise, Amazon can be reached with the following stop buzzer information:

KuiperSat Operations

Email: kuipersat-ops@amazon.com

Phone: (703) 691-5360

II. GRANT OF THIS AMENDMENT WILL SERVE THE PUBLIC INTEREST

Granting this amendment will promote the public interest by allowing Amazon to deploy and begin operating the Kuiper System in an efficient manner. In evaluating a similar request for LEOP authority, the Commission held that such a grant would serve the public interest by allowing “testing [of] satellites at injection altitude.”⁸ Similarly, by commencing communications payload

⁷ To the extent Kuiper uses Ka-band communications links to perform TT&C functions, operations on a non-interference, non-protected basis will ensure that such operations are consistent with Section 25.202(g)(1) of the Commission’s rules. *See* 47 C.F.R. § 25.202(g)(1) (providing that “[t]elemetry, tracking, and command signals may be transmitted in frequencies within the assigned bands that are not at a band edge only if the transmissions cause no greater interference and require no greater protection from harmful interference than the communications traffic on the satellite network”).

⁸ *Space Exploration Holdings, LLC, Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, Order and Authorization and Order on Reconsideration, 36 FCC Rcd 7995, ¶ 70 (2021).

testing at insertion altitude and concurrently with orbit raising maneuvers here, Amazon will be better able to assess the health of, and identify any issues with, the satellites and their payloads.

Remediating issues that appear during LEOP is more efficient and safer to complete than detecting and remediating issues only after such satellites are placed in mission orbit. For example, some problems may warrant deorbiting and replacing a satellite altogether. Beginning this process before a satellite reaches mission altitude reduces the distance that the satellite must travel to be safely deactivated, thereby lowering the risk of conjunction events with other spacecraft.

The approach outlined above affords Amazon the flexibility to successfully deploy the Kuiper System and, additionally, creates a safer, more predictable orbital environment. Moreover, granting a single blanket authorization instead of numerous grants of special temporary authority (“STA”) would reduce the administrative burden on Commission staff. Avoiding burdening FCC staff with reviewing and issuing grants for identical STAs serves the public interest.

As the Commission itself has recognized, deploying the Kuiper System will advance the public interest by “increas[ing] the availability of high-speed broadband service to consumers, government, and businesses.”⁹ Accordingly, any steps that the Commission takes to facilitate its deployment in a safer and more efficient manner, including by granting the instant request, would serve the public interest for the same reasons.

III. CONCLUSION

Based on the foregoing, Amazon respectfully requests that the Commission grant its request for blanket authority to conduct LEOP and deorbit operations for the Kuiper System.

⁹ *Kuiper System Authorization* ¶ 3.

Respectfully submitted,

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