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April 8, 2024

VIA EMAIL

Mr. Richard DalBello
Director, Office of Space Commerce
Herbert C. Hoover Building, Room 68015
1401 Constitution Ave., NW
Washington, D.C. 20230
space.commerce@noaa.gov

Re: Request for Information: Private Remote Sensing Satellite Disposal and Debris Mitigation;
Document No. 2024–05004; 89 Fed. Reg. 16730

Dear Mr. DalBello,

Spire Global, Inc. ("Spire") respectfully submits these comments in response to the National Oceanic and Atmospheric Administration's ("NOAA") above-referenced Request for Information for Private Remote Sensing Satellite Disposal and Debris Mitigation ("RFI").[1] Specifically, Spire encourages NOAA to ensure that any new regulations avoid unnecessary duplication of existing requirements on U.S.-licensed and market access authorized spacecraft, and promote regulatory equity among Commercial Remote Sensing Regulatory Affairs ("CRSRA") licensees.

Spire is a global leader in space-based data, analytics, and space services, offering unique datasets and powerful insights about the Earth. With over 100 satellites on orbit, Spire owns and operates the world's largest multi-purpose Earth observation constellation, provisioning critical observation data and analytics across several key industries, including aviation, shipping, oil and gas, and transportation. In recent years, Spire has also expanded its service offerings to its customers to include "space-as-a-service;" enabling customers to take advantage of flight proven Spire platforms and mission management capabilities for purposes of operating their own equipment or software on orbit, including imaging payloads and sensors. Spire's proprietary analytics capabilities are then used to enrich the data acquired by its satellites and customer payloads to provide additional insights that help organizations and governments make more informed decisions for the betterment of all. Spire's data and solutions are used worldwide by commercial and government organizations to gain advantages, facilitate innovation, and tackle some of the world's greatest challenges, including climate change and global security.

[1] *See* Request for Information: Private Remote Sensing Satellite Disposal and Debris Mitigation, Document No. 2024–05004, 89 Fed. Reg. 16730 (Mar. 8, 2024) ("RFI").

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Spire's constellation is primarily authorized pursuant to Federal Communications Commission ("FCC") Part 25 licenses and grants of market access. Under this regulatory regime, both Spire's U.S. and non-U.S. licensed satellites are equally subject to the FCC's Part 25 rules on orbital debris mitigation, including end-of-life disposal.[2] As Spire's satellites are non-imaging, Spire does not maintain a CRSRA license for its overall constellation.[3] However, as a space-as-a-service provider, several of Spire's current and prospective payload customers are or may be subject to CRSRA licensing requirements. Any orbital debris mitigation and disposal requirements that NOAA may impose on such hosted payload would thereby extend to the Spire satellite bus and mission operations.

Spire encourages NOAA to continue to avoid adopting duplicative regulatory requirements[4] by (i) maintaining the status quo with regard to spacecraft currently licensed by the FCC, including through market access, and (ii) extending such deference to hosted payloads seeking CRSRA licenses that will be flown aboard satellites licensed or granted market access through the FCC's Part 25 or Part 5 rules.[5] This will help prevent unnecessary regulatory burdens, delay, and cost for operators and their customers who are already subject to U.S. regulatory oversight.

NOAA should, however, adopt a process by which operators seeking CRSRA authorization who are not otherwise subject to FCC oversight—and thus the orbital debris mitigation rules—are required to make equivalent orbital debris demonstrations as part of CRSRA application. As RFI rightly recognizes, there is an increasing number of remote sensing systems seeking CRSRA authorization that are not subject to FCC jurisdiction.[6] As a result, CRSRA licensees may be subject to widely disparate standards on debris mitigation depending on whether they also come under FCC regulatory jurisdiction and where they are principally licensed. To ensure major differences in debris mitigation capabilities—and forum shopping—do not emerge within the cohort of CRSRA licensees, operators requesting U.S. remote sensing authorization should be required to demonstrate compliance with the U.S. regulation on orbital debris mitigation. Spire encourages NOAA to cross-reference and incorporate the FCC requirements for debris

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[2] 47 C.F.R. § 25.114(d)(14).

[3] 51 U.S.C. Chapter 601.

[4] *Licensing of Private Remote Sensing Space Systems*, 85 Fed. Reg. 30,790, 30,799 (May 20, 2020) ("defer[ring] to FCC license requirements regarding orbital debris and spacecraft disposal" in order "[t]o avoid duplicative regulation.").

[5] The party seeking a CRSRA authorization may be different than the party obtaining an FCC license in a hosted payload/space-as-a-service arrangement. For example, while a space-as-a-service provider is required to include the hosted payload as part of its FCC application, including the orbital debris assessment report, its hosted payload customer may separately obtain their own CRSRA license, which may be more limited in scope. In these instances, the FCC license for the satellite should still qualify the hosted payload for exemption from any new CRSRA orbital debris requirements.

[6] RFI at 16731.

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mitigation—including submission of an orbital debris assessment report—into Chapter 601 of its rules to prevent disparate requirements among operators seeking U.S. licensure.[7]

Spire also encourages NOAA, and the Department of Commerce writ large, to continue to participate in the FCC's open rulemaking on orbital debris mitigation,[8] to ensure that the lessons learned from remote sensing licensing are incorporated into a robust orbital debris regime that can be holistically applied to all U.S. licensed and market access spacecraft.

Spire commends NOAA's commitment to expediently identifying and remediating a gap in the CRSRA regulations that could otherwise encourage forum shopping by less fastidious operators seeking to avoid regulatory oversight. By maintaining the status quo for licensees already subject to FCC authority and adopting rules that would apply the same orbital debris standards and showings to standalone CRSRA applicants, NOAA can avoid unnecessary duplication while fostering coherence and equitable treatment for remote sensing operators under its licensing regime.

Respectfully Submitted,

/s/ Boyd Johnson

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[7] 47 C.F.R. § 25.114(d)(14).

[8] *See* IB Docket No. 18-313.