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November 24, 2015

***Via Electronic Filing***

Experimental Licensing Branch  
Office of Engineering and Technology  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

**Re: Spire Global, Inc.  
ELS File No. 0705-EX-PL-2015**

To Whom It May Concern:

Spire Global, Inc. ("Spire") hereby requests authority from the Office of Engineering and Technology ("OET") to launch and operate an additional four satellites as part of Spire's Lemur-2 satellite system.<sup>1</sup> The OET has authorized already the launch and operation of the initial eight Lemur-2 satellites and associated ground stations,<sup>2</sup> and Spire also has pending applications for the launch of additional satellites.<sup>3</sup>

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<sup>1</sup> The instant application reflects the corrected emission designator for the 2020-2025 MHz downlink band (5M00G1D), ERP for the 400-403 MHz uplink band (860W), and addresses for the ground stations located in the U.S. Virgin Islands and Guam, all of which were identified in a previous application. See Application, ELS File No. 0684-EX-PL-2015 (filed November 4, 2015). The instant application also reflects the following: (i) the decommissioning of the Shady Grove, Texas ground station; (ii) the addition of two new stations located in Richardson, Texas and Salt Lake City, Utah, respectively; (iii) a revised width of beam at the half-power point for all earth stations; and (iv) the updated latitude and longitude coordinates for the ground stations located in the U.S Virgin Islands and Guam.

<sup>2</sup> See Application, Call Sign WH2XQT, ELS File No. 0041-EX-PL-2015 (granted June 9, 2015) (applicant should seek approval for subsequent launches in separate applications); see also Application, Call Sign WH2XQT, ELS File No. 0129-EX-ML-2015 (granted July 17, 2015).

<sup>3</sup> See Application, Call Sign WH2XQT, ELS File No. 0171-EX-ML-2015 (filed August 24, 2015); ELS File No. 0684-EX-PL-2015 (filed November 4, 2015).

Spire is submitting this application to replace four of its satellites, which had been authorized by the OET for an Atlas V launch.<sup>4</sup> As a result of the failure of the integrator and launch service provider to complete certain environmental testing, the Spire satellites will not be a part of that launch.

The satellites subject to this application, which are technically identical to the prior authorized satellites,<sup>5</sup> are scheduled to launch aboard a Falcon-9 launch vehicle from Cape Canaveral, Florida on January 3, 2016, as a secondary payload.

For the OET's convenience, Spire is including in this application the following attachments:

- Exhibit A – the narrative filed with the initial experimental application regarding the Lemur-2 system.<sup>6</sup>
- Exhibit B – the Orbital Debris Assessment Report (“ODAR”) showing that the proposed four satellites are fully compliant with NASA orbital debris guidelines.

The four satellites will be deployed from the International Space Station at an altitude of 400 km and with an inclination of 51.6 degrees. With respect to the coordination of this application with NTIA, the revised response to inquiry 1B of the NTIA coordination form (regarding inclination angle, apogee in kilometers, perigee in kilometers, orbital period in hours and fractions of hours in decimal, and the number of satellites) should be as follows:

“Falcon-9: ORB, 51.6IN00400AP00400PE001.60H04NRT01.”

If there are any questions regarding this application, please contact the undersigned.

Very truly yours,

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Trey Hanbury

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<sup>4</sup> See Application, Call Sign WH2XQT, ELS File No. 0129-EX-ML-2015 (granted July 17, 2015).

<sup>5</sup> All of the satellites have the same relevant radiofrequency characteristics (e.g., transmit power, out-of-band emissions, antenna patterns and gain, and transmit and receive frequencies).

<sup>6</sup> See Narrative Statement attached to Application, Call Sign WH2XQT, ELS File No. 0041-EX-PL-2015 (granted June 9, 2015).