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Via Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Notice: *Globalstar, Inc. Petition for Notice of Inquiry Regarding the Operation of Outdoor U-NII-1 Devices in the 5 GHz Band* – RM-11808

Dear Ms. Dortch:

On October 10, 2018, L. Barbee Ponder IV, General Counsel & Vice President, Regulatory Affairs, for Globalstar, Inc. ("Globalstar"), Dr. Kenneth Zdunek of Roberson and Associates, LLC, Steve Berman of Lawler, Metzger, Keeney & Logan, LLC, and I spoke by telephone with Erin McGrath, Legal Advisor to Commissioner Michael O'Rielly, regarding Globalstar's May 2018 Petition for Notice of Inquiry on the viability of continued spectrum sharing between its licensed mobile satellite service ("MSS") operations and outdoor Unlicensed National Information Infrastructure ("U-NII") devices operating in the 5.1 GHz band.[1]

As described in the Petition, Globalstar has since early 2017 measured a dramatic rise in the noise level in the 5.1 GHz band, where it is licensed for "feeder uplink" transmissions from its gateway earth stations to its satellites.[2] Globalstar's real-world data and technical analysis demonstrate that this noise rise is the result of outdoor, higher-power operation of U-NII-1 Wi-Fi access points and other devices, permitted by the Commission in April 2014.[3] Every Globalstar satellite "hears" all transmissions in its 5096-5250 MHz feeder uplink band across a constantly moving 7,800 kilometer-wide area on the Earth's surface. Aggregate emissions from U-NII-1 access points within this area radiate in the direction of Globalstar's satellites, increasing the noise level in its feeder uplink and in turn degrading Globalstar's MSS to end users in the 2.4 GHz band. After two plus years of deployments, Globalstar is already experiencing a detrimental

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1 Petition for Notice of Inquiry of Globalstar, Inc., RM-11808 (May 21, 2018) ("Petition"); Public Notice, *Consumer & Governmental Affairs Bureau Reference Information Center Petition for Notice of Inquiry*, Report No. 3092 (rel. June 6, 2018).

2 Petition at 10-12.

3 *Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, First Report and Order, 29 FCC Rcd 4127, ¶¶ 34-46 (2014) ("*2014 5 GHz Order*").

impact from outdoor U-NII-1 operations, having confirmed a 2 dB increase in the 5.1 GHz noise level since the Commission's *2014 5 GHz Order*.

Importantly, as described in the Petition, Globalstar has geographically isolated the noise floor rise at 5.1 GHz to North America.[4] This noise rise is happening only in the vicinity of the United States, where unlimited, higher-power outdoor U-NII-1 deployments have been permitted. Globalstar has conducted extensive measurements showing *no noise increase* over Mexico and Central America, Europe, Australia, or "blue ocean."

During this call, we pointed out that before, during, and after the Commission's July pleading cycle on the Petition, the opponents to Globalstar's Petition provided no measurements or other empirical data of their own regarding the noise floor rise at 5.1 GHz, even though many have known about Globalstar's concerns since at least November 2017.[5] Nor have these parties identified any other plausible cause of this noise floor rise and resulting interference. As these opponents highlighted in their filings, cable operators and other broadband providers going forward will only increase their reliance on outdoor U-NII-1 operations, making it abundantly clear that the noise floor rise at 5.1 GHz will continue unabated. Globalstar's uncontroverted evidence of harmful aggregate interference to its Big LEO MSS operations raises concerns similar to aggregate interference issues arising in several other frequency bands where the Commission is considering spectrum sharing between new terrestrial wireless systems and existing satellite operations.[6]

If the Commission does not promptly investigate and explore remedies to the 5.1 GHz noise rise, harmful aggregate interference will seriously degrade Globalstar's MSS offerings – including services provided to the public safety community – in the foreseeable future. Globalstar's products and services are used daily by public safety personnel and other customers around the world for emergency communications, in many instances resulting in life-saving rescues. Globalstar has invested heavily in a second-generation constellation of satellites and ground infrastructure, and it does and will continue to rely heavily upon its two-way

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4 Petition at 11.

5 *See* Consolidated Reply of Globalstar, Inc., RM-11808, at 8-11 (July 23, 2018).

6 For instance, Sirius XM Radio, Inc. has described at length its concerns regarding harmful aggregate interference from the potential deployment of unlicensed terrestrial transmitters at 7025-2075 MHz to its sole feeder link spectrum for its licensed satellite digital audio radio service. *See* Comments of Sirius XM Radio Inc., RM-11808 (July 6, 2018); Letter from Karis Hastings, Counsel for Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-183 (June 22, 2018). In addition, in its July 2017 Notice of Inquiry on mid-band spectrum, the Commission noted that, in considering unlicensed use of the 5.925-6.425 GHz band, it would have to consider the potential threat of aggregate harmful interference from large numbers of unlicensed devices to satellite receivers operating in that band. *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373, ¶ 29 (2017).

communications platforms to keep people connected regardless of the availability of terrestrial networks. Harmful aggregate interference to Globalstar's MSS feeder uplink spectrum at 5.1 GHz will have a substantial, detrimental impact on Globalstar's two-way satellite services.

Thus, with the closing of the pleading cycle on Globalstar's Petition and opponents' utter failure to provide contrary evidence, the Commission should expeditiously issue a Notice of Inquiry that investigates the noise floor rise at 5.1 GHz and creates the detailed record necessary for a long-term solution to this harmful interference. The Commission has a statutory obligation to protect licensed services, and it committed in its 2014 order to take "corrective action" in response to any harmful interference to Globalstar MSS.[7] The Commission should open a proceeding on these crucial interference issues rather than look the other way and do nothing.

Pursuant to section 1.1206(b)(2) of the Commission's rules, 47 C.F.R. § 1.1206(b)(2), this *ex parte* notification is being filed electronically for inclusion in the public record of the above-referenced proceedings.

Respectfully submitted,

/s/ *Regina M. Keeney*
Regina M. Keeney

cc: Erin McGrath

[7] 47 U.S.C. § 301; *2014 5 GHz Order* ¶ 38. In its 2014 order, the Commission recognized that Globalstar's licensed MSS is protected against harmful interference from unlicensed operations and acknowledged Globalstar's technical ability to measure the noise level at its satellite antennas. *Id.* ¶¶ 38, 46.