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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Iridium Satellite LLC, FCC Call Sign E960132,
File Nos. SES-MOD-20170413-00388, SES-AMD-20170726-00812
Iridium Carrier Services LLC, FCC Call Sign E960132,
File Nos. SES-MOD-20170413-00389, SES-AMD-20170726-00813
Ligado Networks Subsidiary LLC, RM-11681; IB Docket No. 11-109;
File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090,
and SAT-MOD-20151231-00091

Dear Ms. Dortch:

Iridium Satellite LLC and Iridium Carrier Services LLC (collectively, "Iridium") have filed the above-referenced applications (the "Applications") seeking authority to operate a new terminal that will provide Iridium CertusSM service via Iridium NEXT, Iridium's second-generation satellite system. Iridium Certus terminals will offer innovative voice and data capabilities to Iridium's commercial, civilian, and military users and, as shown in the Applications, the terminals fully comply with the Commission's requirements.

On December 18, 2017, Ligado Networks Subsidiary LLC (“Ligado”) filed an *ex parte* letter (the “Ligado Letter”)¹ reflecting arguments it made concerning the Applications in a meeting with the International Bureau. Ligado’s arguments are yet another misguided attempt to drag the dispute over its proposed terrestrial services into an unrelated proceeding. Those arguments are not germane to this proceeding and should be categorically rejected as such, consistent with the Satellite Division’s rejection of non-germane arguments raised by Ligado in its earlier attempt to delay the approval of the Iridium NEXT satellite constellation.² Nevertheless, Iridium hereby responds to the Ligado Letter, and asks the Bureau promptly to dispatch those arguments and grant the Iridium Certus Applications.

Ligado incorrectly asserts that Iridium has taken one position in the proceedings addressing the Iridium Certus Applications (the “Iridium Certus Proceeding”) and a different position in the proceedings concerning Ligado’s modified proposals to provide ancillary terrestrial service (“ATC”) via its Mobile Satellite Service (“MSS”) space stations (the “Ligado ATC Proceeding”).³ In fact, Iridium has been completely consistent.

Iridium made plain in the Iridium Certus Proceeding that “[d]ifferent considerations apply to out-of-band emissions from Ligado’s proposed ancillary terrestrial component (“ATC”) service,” because the ATC emissions have “a different regulatory status and substantially different operational characteristics than Ligado’s MSS service.”⁴ As Iridium said, it is “perfectly consistent ... for Iridium to have

¹ *Ex Parte* Letter in the above referenced proceedings, dated Dec 18, 2017, from John P. Janka and Jarrett S. Taubman, Counsel to Ligado Networks Subsidiary LLC, to Marlene H. Dortch, Secretary, FCC.

² See *Iridium Constellation LLC; Application for Modification of License to Authorize a Second-Generation NGSO MSS Constellation*, Order and Authorization, 31 FCC Rcd 8675, 8688 ¶ 43 (Intl. Bur. 2016) (rejecting Ligado request to hold in abeyance Iridium’s application to modify its NGSO MSS license to operate a second-generation satellite system because the “issues Ligado raises in this proceeding are derivative of claims that Iridium has made in IB Dockets 11-109 and 12-340, and are better suited for treatment in those separate proceedings.”). See generally *Motient Services Inc. and TMI Communications and Company, LP Assignors and Mobile Satellite Ventures Subsidiary LLC Assignee*, Order and Authorization, 16 FCC Rcd 20469, 20472, ¶ 9 n. 23 (Intl. Bur. 2001); *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements*, 17 FCC Rcd 8903, 8933 ¶ 76 (2002).

³ Although the Ligado Letter focuses on the Commission’s disposition of the Iridium Certus Applications, Ligado filed the letter in both the Iridium Certus Proceeding and the Ligado ATC Proceeding. Out of an abundance of caution, Iridium is submitting this filing in both proceedings, too.

⁴ See e.g., *Ex Parte* Letter in the above referenced proceedings, dated Nov 13, 2017, from Maureen C. McLaughlin, Vice President, Public Policy and Joseph A. Godles, Counsel to Iridium Satellite LLC and Iridium Carrier Services LLC, to Marlene H. Dortch, FCC (“Iridium November *Ex Parte*”) at n. 14. See also *id.* at 5 (“Section 25.202(f) specifies limits for out-of-band *MSS* emissions in the bands adjacent to Iridium’s Big LEO frequencies, and these limits establish the co-existence environment in which *MSS* receivers in adjacent bands must operate.”) (emphasis supplied).

interference issues with some of Ligado's ATC proposals but not to have interference issues with Ligado's MSS operations, assuming they comply with Section 25.202(f)."⁵

There is, obviously, a fundamental distinction between out-of-band emissions ("OOBE") from MSS earth stations and OOBE from Ligado's ATC devices. As Iridium stated in the Ligado ATC Proceeding, "because satellite services have been allocated spectrum in adjacent bands with established rules to ensure the coexistence of multiple satellite providers, Iridium's system is designed to receive and withstand some level of interference from other satellite systems that share the band or reside in adjacent bands."⁶ On the other hand, "[w]hat Ligado is proposing – the deployment of terrestrial 4G LTE and 5G operations using omnidirectional antennas with vastly different uses and devices, and the potential for tens of millions of such devices, many of which are virtually guaranteed to come into contact with Iridium terminals – is vastly different from Iridium's current operating environment."⁷ Put simply, Ligado's dense ATC network would be much more likely to create harmful OOBE interference to Iridium than would MSS earth stations.

Remarkably for a company on its fifth name with bountiful discarded business plans, Ligado next grasps at alleged inconsistencies in Iridium's deployment plans.⁸ Here, too, Ligado's claim should be rejected. In the Ligado ATC Proceeding, Iridium discussed its broad deployment of all types of L-band terminals – which its nearly one million subscribers now operate in both urban areas and suburban areas. Unsurprisingly, in the Iridium Certus Proceeding, Iridium focused on the Iridium Certus terminals covered by the Applications, which will be operated principally on ships and airplanes.⁹ Accordingly, there is no inconsistency.

Finally, one must wonder whether Ligado has any faith in its own arguments. In the letter summarizing Ligado's first meeting at the Bureau Chief level in this matter, Ligado is silent as to all but one of the previous arguments it made. In the one remaining argument – Ligado's assertion its satellite receivers may be interfered with by Iridium Certus terminals – Ligado fails even to attempt to address Iridium's detailed technical showing demonstrating that this is not a legitimate concern.¹⁰

⁵ *Id.* at n. 9.

⁶ *Ex Parte* Letter, dated Aug 3, 2017, from Bryan N. Tramont and Patrick R. Halley to Marlene H. Dortch re Ligado Networks LLC, IB Docket Nos. 11-109, 12-340; IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, SAT-MOD-20151231-00091, at 3.

⁷ *Id.*

⁸ See Ligado Letter at 3.

⁹ See Consolidated Response of Iridium in the above-referenced Iridium Certus proceedings (Sept. 18, 2017) at 10.

¹⁰ See Iridium November *Ex Parte* at 2-4.

- Ligado's own MSS signals are more than 4200 times more powerful than OOBE from Iridium Certus terminals, which fully comply with Section 25.202(f) OOBE limits. Put another way, it would take more than 4200 Iridium Certus terminals transmitting simultaneously to equal the interference to Ligado from another Ligado MSS terminal. Any suggestion that Ligado's satellites cannot receive Ligado uplink transmissions because of Iridium Certus OOBE that are weaker than Ligado uplink signals by a factor in excess of 4200 is preposterous.
- The RF power Ligado's satellites will receive from Iridium Certus transmissions, which fully comply with the FCC's power limits, also pales in comparison to the RF power the satellites are subject to from other sources.¹¹
 - Ligado's satellite receivers already are functioning in the presence of Inmarsat signals that are 3.4 times more powerful than a maximum power Iridium Certus signal will be.
 - Ligado fails to take its proposed ATC terminals into account. There could be tens of millions of these terminals, and their omnidirectional antennas will direct RF power toward Ligado's satellites 100% of the time the ATC terminals are transmitting.

Given these facts, any claim that Ligado's satellite receivers could be overloaded by transmissions from Iridium Certus terminals lacks credibility.

¹¹ Most of the signals transmitted by Iridium Certus terminals will be well below maximum power.

CONCLUSION

For the reasons stated herein, Ligado's consistency and interference arguments should be rejected and the Iridium Certus Applications should be granted without delay.

Respectfully submitted,

**IRIDIUM SATELLITE LLC
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