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July 11, 2019

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

**Re: ET Docket No. 19-155, *Geophysical Survey Systems, Inc., Request for Waiver of Part 15 of the Commission's Rules to Market an Ultra-Wideband Evaluation Kit*
*Ex Parte Communication***

Dear Ms. Dortch:

Geophysical Survey Systems, Inc. (GSSI) responds to the late-filed comment of Aviation Spectrum Resources, Inc. (ASRI), dated July 5, 2019.

GSSI has requested a waiver of the Commission's rules to permit the marketing of an evaluation kit for an ultra-wideband (UWB) ground penetrating radar (GPR) device, solely for testing in autonomous vehicles. Mounted under the vehicle, the system looks down through the pavement and reads features of the roadbed beneath to help keep the vehicle in its correct lane. The device uses stepped continuous wave (CW) frequencies and complies in full with the GPR emission limits, when measured with the system in normal operation. Its interference potential is no higher than a compliant GPR system.

ASRI expresses concern about possible interference to aviation safety communications in the 117.975- 137 MHz band.

Because the GSSI system complies with the existing GPR emissions limits, its potential for causing interference is no greater than a device that does not require a waiver. It raises no new interference issues.

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The FAA was active in the UWB proceeding (ET Docket 98-153) through the National Telecommunications and Information Administration (NTIA). With input from the FAA, NTIA and the Commission carefully considered the effects of UWB on aviation. Indeed, the Commission acknowledged at the time that its newly adopted rules “may be overprotective.”¹ The emissions limits have remained unchanged since then.

The emissions limit in the band of concern is 150 $\mu\text{V}/\text{m}$ at 3 meters, equivalent to -51.7 dBm and less than 7 nanowatts.² A signal at this level cannot realistically cause interference to an aviation receiver.

Nevertheless, in order to promote an expeditious grant of the waiver, **GSSI will agree to avoid intentional emissions in the 117.975-137 MHz band.** In addition to the waiver conditions it originally proposed, GSSI will accept a condition that says, in substance, “The device will not transmit in the range 117.975-137 MHz.”

Respectfully submitted,



Mitchell Lazarus
Counsel for Geophysical Survey Systems, Inc.

cc (by email to ACR@ASRI.com): Andrew C. Roy, ASRI

¹ *Ultra-Wideband Transmission Systems*, First Report and Order, 17 FCC Rcd 7435 at ¶ 1 (2002).

² 47 C.F.R. § 15.509(d), *citing* 47 C.F.R. § 15.209 for frequencies below 960 MHz.