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May 3, 2010

* NOT ADMITTED IN VIRGINIA

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

**Re: ET Docket No. 10-27, Ohmart/VEGA Corporation, Request for Waiver
of Section 15.252
ET Docket Nos. 10-23, 06-216, No. 07-96, Regulations for Tank Level
Probing Radars in the Frequency Band 77-81 GHz
Ex Parte Communication**

Dear Ms. Dortch:

On behalf of Ohmart/VEGA Corporation, pursuant to Section 1.1206(b)(1) of the Commission's Rules, I am electronically filing this written ex parte communication in the above-referenced dockets.

This letter responds to untimely comments filed by Angela Queen on April 8, 2010.

Ohmart/VEGA files this statement in the same proceedings as did Queen, although our primary concern here is with ET Docket No. 10-27, *Ohmart/VEGA Corporation, Request for Waiver of Section 15.252*.

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Queen agrees with Ohmart/VEGA that LPRs operating under the requested waiver would not cause harmful interference to other spectrum users.¹ She challenges only the proposed test procedure, based in part on the sample test report filed by Ohmart/VEGA on April 2, 2010.

Queen argues that our proposed locations of the measurement antenna (3 meters horizontally from the main beam, 1–4 meters above the ground plane) will not capture the maximum emissions in every case, particularly over water.² We agree that measurements taken from overhead, next to the transmit antenna, would yield higher emissions, at least over water. But there are no interference victims overhead. The proposed set-up measures the emissions that might impinge in a victim receiver. Those are the only ones that count.

The Commission generally measures emissions in configurations that simulate actual use. For example, Tank Level Probing Radars are measured while inside concrete, metal, or reinforced fiberglass tanks, with measurement antennas located as Ohmart/VEGA proposes here.³ A tunnel radio system, where the transmitter operates entirely underground, is permitted to be measured at the mouth of the tunnel.⁴ A railroad identification system having tags inside cars, which are activated when the car passes over a transmitter in the tracks, is measured with the car overtop the transmitter.⁵ Ground penetrating radars are measured from the side (at distances and directions as proposed here) with the device emitting downward into sand.⁶ In each case, and others, measurement set-ups resemble actual use, with the measurement antenna standing in for potential victim receivers. The same principle should apply to 26 GHz LPRs.

¹ Comments of Angela Queen at 1.

² *Id.* at 2-4.

³ A number of tank LPR test reports filed by Ohmart/VEGA and other manufacturers, and accepted by the Commission, have used this technique.

⁴ 47 C.F.R. § 15.211(c).

⁵ Private letter ruling.

⁶ *Ultra-Wideband Transmission Systems*, First Report and Order, 17 FCC Rcd 7435 at Appendix F ¶ 1 (2002).

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Queen also argues that measurements using sand will under-represent reflections from solid materials generally.¹ We disagree. The dielectric constant of sand is close to that of other materials likely to be measured using LPRs:²

Product	Dielectric constant	Reflection loss [dB]
fine silica sand (dry)	2.0	-15.4
Wood chips	2.3	-13.8
Coal	2.5	-12.9
Stone (gravel)	2.5	-12.9

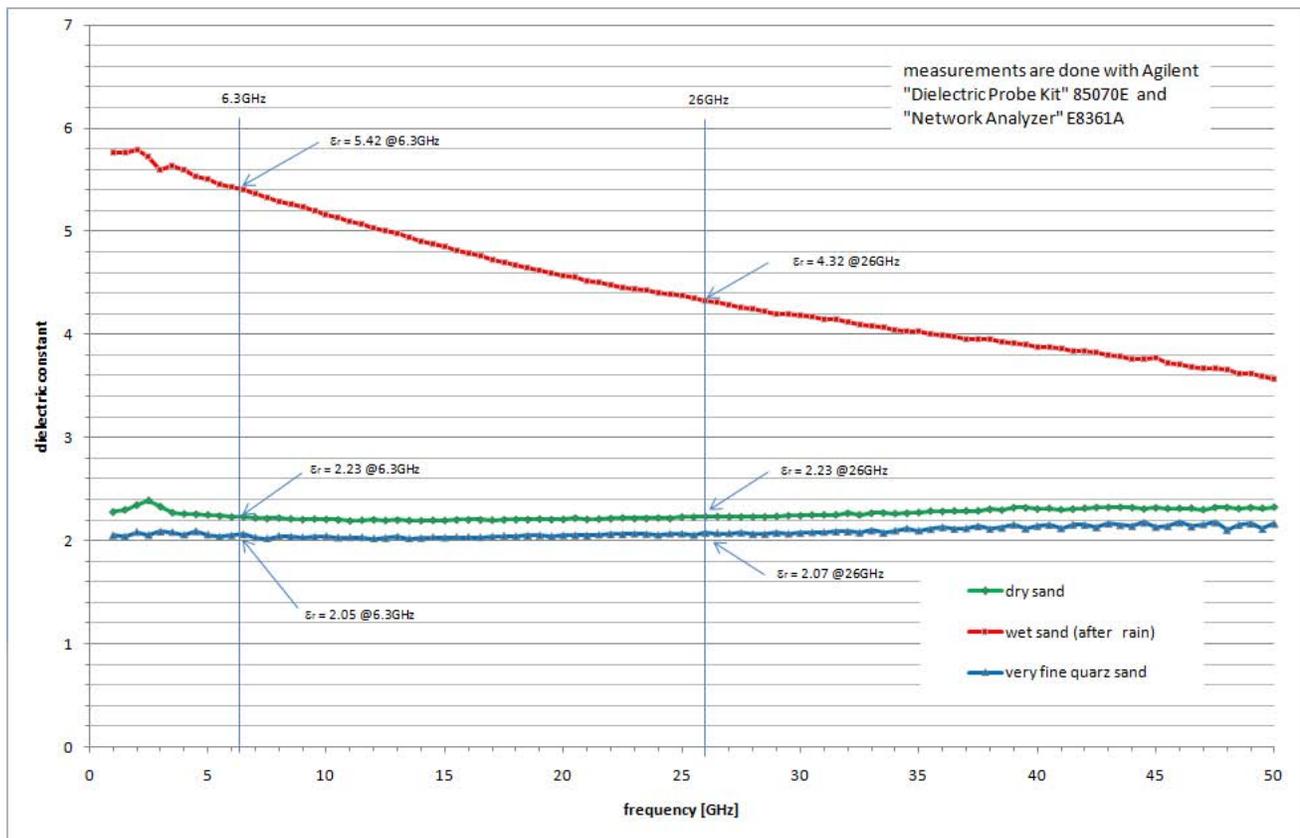
Moreover, dry sand has a dielectric constant that remains almost constant over a wide range of frequencies, as shown in the plot below.

Sand is also inexpensive, reasonably uniform around the world, easy to obtain, and easy to dispose of safely.

¹ Comments of Angela Queen at 4.

² Source, with data for a great many other materials: [Link: List of dielectric constants](#)

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Finally, Queen notes that the test results filed by Ohmart/VEGA on April 2, 2010, did not consider all of the antennas and applications of LPRs marketed by the company. This is correct. The document itself notes:

This report is not intended for certification of a product, *since it does not include test data for all variations of the LPR*. Its primary purpose is to confirm that the procedures used to show compliance with 47 CFR 15.252 is acceptable to the FCC Laboratory staff.¹

¹ *FCC 15.252 REPORT* at ¶ 1 (emphasis added), filed with Letter from Mitchell Lazarus to Dr. Rashmi Doshi, ET Docket No. 10-27 (filed April 2, 2010).

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CONCLUSION

Ohmart/VEGA continues to maintain that the requested waiver, with the proposed test procedure, will provide clear benefits to U.S. industry and to the public, and presents no realistic risk of harmful interference to other spectrum users. Nothing in the Queen comments establishes otherwise.

Respectfully submitted,



Mitchell Lazarus
Counsel for Ohmart/VEGA Corporation

cc: Chairman Julius Genachowski
Commissioner Michael J. Copps
Commissioner Robert McDowell
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