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April 30, 2010

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

Re: *Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band (WT Docket No. 07-293) and Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band (IB Docket No. 95-91)* -- WRITTEN EX PARTE PRESENTATION

Dear Ms. Dortch:

For some time, the WCS Coalition has been in discussion with representatives of the National Telecommunications and Information Administration ("NTIA") in an effort to seek a resolution of NTIA's concerns regarding potential interference from WCS operations into mobile aeronautical telemetry ("MAT") facilities operating above 2360 MHz. I am writing to confirm that, although there remain issues to be resolved by the Commission, the WCS Coalition does not object to a proposal advanced by NTIA for modifying the out-of-band emission ("OOBE") limitations proposed in the staff's April 2, 2010 *Public Notice*[1] as a means of mitigating potential interference into federal and non-federal MAT systems.

Under NTIA's proposal, in place of the OOBE limits proposed by the staff, WCS licensees would be required to attenuate their OOBE below 2305 MHz and above 2360 MHz in accordance with the limits set forth on the Attachment to this correspondence.[2] *The WCS*

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[1] *See* Commission Staff Requests That Interested Parties Supplement the Record on Draft Interference Rules for Wireless Communications Service and Satellite Digital Audio Radio Service, *Public Notice*, DA No. 10-592, at 1 (rel. Apr. 2, 2010) ("*Technical Public Notice*").

[2] In a recent filing, Sirius XM Radio Inc. ("Sirius XM") has mischaracterized positions taken by the WCS Coalition to suggest that the technical rules proposed by the Commission's staff in the *Technical Public Notice* are not "fair and balanced," claiming they too closely yew to WCS industry proposals. *See* Comments of Sirius XM Radio Inc., IB Docket No. 95-91 and WT Docket No. 07-293, at 29-30 (filed April 23, 2010). In so doing, Sirius XM ignores the proposed rules that the WCS Coalition initially advocated, and instead focuses on compromise positions that the WCS Coalition has been willing to accept as these proceedings evolved in the hope of moving them towards resolution. The simple reality is

Coalition must stress that its willingness to accept the more stringent OOBE limits above 2360 MHz is expressly contingent upon adoption of the proposed limits below 2305 MHz. Attenuating wireless broadband signals to 70+10log(p) at 2300 MHz, as required under the present rule, is not a trivial exercise for the vendor community. To also meet a 70+10log(p) benchmark at 2365 MHz would be highly problematic, as the resulting filter insertion loss would have material battery life and device cost implications, as well as delay deployments, because a higher power amplifier output would have to be incorporated into devices. Simply put, the vendor community can satisfy a 70+10log(p) attenuation requirement 5 MHz from band-edge at one end, with some pain, but requiring it at both ends jeopardizes the viability of the mobile service. That said, if WCS must meet 70+10log(p) just 5 MHz from band-edge at one end of the WCS band or the other, it is largely immaterial whether that requirement is imposed on the upper end or the lower end. Thus, the proposed relief at 2300 MHz opens the door to the tighter mask at 2365 MHz that NTIA desires.

It also must be noted that, notwithstanding this compromise regarding OOBE limits, NTIA and the WCS Coalition have not reached agreement regarding two key issues. First, NTIA and the WCS Coalition have not reached agreement regarding to the size of coordination zones surrounding MAT facilities. We have been advised by NTIA that its proposal is contingent upon adoption of 45 km coordination zones for new WCS base stations. Consistent with the technical analysis filed with the Commission last week, the WCS Coalition continues to believe that a 10 km coordination zone would be sufficient to protect MAT operations.[3]

Second, NTIA and the WCS Coalition have agreed that a resolution bandwidth of 1 MHz should generally be used in evaluating compliance with the Commission's OOBE requirements. However, that approach is problematic for the first 1 MHz on either side of a frequency band being used for wideband technologies that incorporate Orthogonal Frequency Division Multiple Access ("OFDMA") technology, including WiMAX and TD-LTE. Thus, the WCS Coalition previously has proposed to the Commission that Section 27.53(a)(4), which governs WCS

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that the WCS Coalition has been prepare to accept less than ideal compromises that, in the WCS Coalition's view, provide greater protection to Sirius XM and to MAT under the circumstances, and those compromises are being reflected in the staff proposals. This may become one of those situations. The WCS Coalition did not initially propose any change in the OOBE limits below 2305 MHz or above 2360 MHz and is not convinced that any changes are necessary to provide reasonable protection to MAT. However, we have worked in good faith with NTIA to develop a middle ground, and the resulting limits are those that WCS can live with (albeit just barely). If the Commission adopts these limits, along with the WCS Coalition's proposed resolution bandwidth and coordination zone proposals, the result will not be a "win" for WCS Coalition no matter how Sirius XM tries to paint it.

[3] *See* Comments of WCS Coalition, IB Docket No. 95-91 and WT Docket No. 07-293, at 6-11, Appendix B (filed April 23, 2010).

resolution bandwidths, be modified to incorporate a special procedure that would apply in the 2304-2305 MHz and 2360-2361 MHz bands.[4] As we explained at the time:

> At channel edge, with a resolution bandwidth of either 1% of the emissions bandwidth or 1 MHz as provided under the existing procedures, the measurement device will capture power associated with the main carrier into the out of band emissions measurement. This is due to the wideband nature and spectral roll off characteristic of the OFDMA signal. As such, the WCS Coalition recommends that a narrower bandwidth be permitted in the measurement, so long as the measured power is integrated over a 1 MHz bandwidth.. The proposed language is taken verbatim from Sections 25.254(d)(6) and 27.53(m)(6) of the Rules, which were adopted to solve the same problem in connection with wideband OFDMA operations in the Big LEO ATC and 2.5 GHz bands.[5]

The WCS Coalition's understanding is that NTIA is still reviewing the WCS Coalition's proposal.

Should you have any questions regarding this presentation, please contact the undersigned

Respectfully submitted,

/s/ Paul J. Sinderbrand

Paul J. Sinderbrand

Counsel to the WCS Coalition

Attachment

cc: Bruce Gottlieb
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[4] *See id.* Appendix A at xi (filed April 23, 2010).

[5] *Id.*

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Linda Chang
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Richard Arsenault
Tom Derange
Ira Keltz
Moslem Sawez
Jay Jackson
Ron Repasi
Robert Weller
Hung Le
Patrick Forster
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Salomon Satche

REQUIRED ATTENUATION ABOVE 2360 MHz

Sections 27.53(a)(1) and 27.53(a)(2)(i) – Base Stations, Fixed Station and Fixed CPE Above 2 Watts Average EIRP:

43 + 10 Log (P) in the 2360-2362.5 MHz band segment
55 + 10 Log (P) in the 2362.5-2365 MHz band segment
70 + 10 Log (P) in the 2365-2367.5 MHz band segment
72 + 10 Log (P) in the 2367.5-2370 MHz band segment
75 + 10 Log (P) above 2370 MHz

Sections 27.53(a)(2)(ii) and 27.53(a)3) – Fixed CPE At Or Below 2 Watts Average EIRP, Mobile and Portable Stations:

43 + 10 Log (P) in the 2360-2365 MHz band segment
70 + 10 Log (P) above 2365 MHz

REQUIRE ATTENUATION BELOW 2305 MHz

Sections 27.53(a)(1) and 27.53(a)(2)(i) – Base Stations, Fixed Station and Fixed CPE Above 2 Watts Average EIRP:

43 + 10 Log (P) in the 2300-2305 MHz band segment
70 + 10 Log (P) in the 2300-2287.5 MHz band segment
72 + 10 Log (P) in the 2287.5-2285 MHz band segment
75 + 10 Log (P) below 2285 MHz

Sections 27.53(a)(2)(ii) and 27.53(a)3) – Fixed CPE At Or Below 2 Watts Average EIRP, Mobile and Portable Stations:

43 + 10 Log (P) in the 2300-2305 MHz band segment
55 + 10 Log (P) in the 2296-2300 MHz band segment
61 + 10 Log (P) in the 2292-2296 MHz band segment
67 + 10 Log (P) in the 2288-2292 MHz band segment
70 + 10 Log (P) below 2288 MHz band

Note: All power levels are measured using average power.