

March 19, 2009

Paul Murray
Office of Acting Chairman Michael Copps
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Renée Crittendon
Office of Commissioner Jonathan Adelstein
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Angela Giancarlo
Office of Commissioner Robert McDowell
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 Mr. Murray, Ms. Giancarlo and Ms. Crittendon:

You were recently copied on a letter to me from counsel to Sirius XM Radio Inc. (“Sirius XM”).¹ In that letter, Sirius XM asserts that the WCS Coalition’s March 9, 2009 Section 1.1206(b)(2) *ex parte* notification inaccurately reports on a March 6th meeting among the WCS Coalition, Sirius XM and representatives of the Office of Engineering and Technology (“OET”), the Wireless Telecommunications Bureau and the International Bureau.² So that there is absolutely no confusion here, let me be blunt – *it is Sirius XM that is distorting what was discussed at that meeting and mischaracterizing the WCS Coalition’s March 9th filing*. That is not just my recollection, but it is the recollection of every one of the representatives of the WCS Coalition who attended the meeting. I am fully confident that those who attended the meeting on

¹ Letter from Robert Pettit, Counsel to Sirius XM, to Paul Sinderbrand, Counsel to WCS Coalition, WT Docket No. 07-293, at 1 (dated March 11, 2009)[“March 11, 2009 Pettit Letter”].

² Letter from Paul Sinderbrand, Counsel to WCS Coalition, to Marlene H. Dortch, FCC Secretary, WT Docket No. 07-293 *et al.* (dated March 9, 2009)[“March 9, 2009 WCS Coalition *Ex Parte* Notice”]. For your convenience, a copy of the March 9, 2009 WCS Coalition *Ex Parte* Notice is attached.

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behalf of the Commission will accurately remember what was said there.³ Because you were not present, I am writing to make sure that you are not misled by Sirius XM's latest gambit.

The March 6th meeting was convened by the Commission staff to discuss a video that Sirius XM showed to you and others at the Commission. That video purported to demonstrate that operation of mobile Wireless Communications Service ("WCS") devices compliant with the technical rules proposed in the draft order currently circulating among the Commissioners would cause harmful interference to Sirius XM's service. As soon as the WCS Coalition was able to obtain a copy of that video (which Sirius XM did not serve on us and which still is not available on the Electronic Comment Filing System), we recognized that the testing had to be seriously flawed. However, because Sirius XM chose to play "hide the ball" as to the details of its testing program, our technical experts were unable to identify with precision all of the flaws in the Sirius XM presentation.

On February 20th, I spoke with the Chief of OET to express the WCS Coalition's concerns regarding Sirius XM's misleading submission. As reported in my February 21st Section 1.1206(b)(2) notice of that oral *ex parte* communication:

During the course of the conversation, I pointed out that the Sirius XM video is difficult to square with the fully-documented results of WCS Coalition testing that has previously been provided to the Commission. As a result, the WCS Coalition believes there have been fundamental flaws in the design of the test and/or in its implementation. However, because Sirius XM has not provided the Commission with sufficiently detailed technical information regarding the design or implementation of the testing shown in the video, the WCS Coalition cannot identify with certainty all of the errors that infected the test. Because of this lack of information, all of which is exclusively within the control of Sirius XM at this time, the video cannot be credited by the Commission as evidence that the rules proposed in the draft order presently circulating among the Commissioners will result in undue interference to Sirius XM's operations.

I suggested that the most expedient way to determine whether the Sirius XM test has any validity is to require that Sirius XM replicate the test with representatives of the Commission and the WCS Coalition in attendance. Mandating that Sirius XM do so will provide the Commission's staff and the WCS Coalition with a full and fair opportunity to fully examine and evaluate the test equipment and the manner in which it is operated during the testing program. Representatives of the

³ To avoid any possibility that the Commission representatives who attended the meeting will think the WCS Coalition agrees with counsel's mischaracterization of the March 6th meeting, each of them is being provided with a copy of this letter.

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WCS Coalition are ready, willing and able to travel to New Jersey on short notice to participate in such a test.⁴

Rather than call for the Commission staff and the parties to travel to New Jersey to witness a replication of the Sirius XM test, OET requested that the parties participate in a meeting at Commission headquarters on March 6th to discuss the specifics of how Sirius XM performed the tests and to identify appropriate next steps.

As I reported in my summary of the March 6th meeting, in response to questions posed by the Commission staff and the WCS Coalition, Sirius XM revealed details regarding its test program that established at least one thing – contrary to the impression that Sirius XM left with those who viewed its video, the testing program did not simulate what will occur in the field if the draft order is adopted. To the contrary, the test program was designed to skew the results in a way that suggests far more interference from WCS to Sirius XM than is likely to occur.⁵

For example, as I reported in my March 9th *ex parte* notice, Sirius XM conceded during the meeting that its test equipment did not filter out-of-band emissions (“OOBE”) in accordance with the stepped OOBE limits that the WCS Coalition has suggested to provide Sirius XM with additional protection against interference.⁶ Yet, rather than restrict OOBE during its test to the reduced levels permitted under the stepped mask, Sirius XM employed a less protective OOBE mask that resulted in greater interference to its service. When this flaw was pointed out at the March 6th meeting, Sirius XM claimed that it believed the draft order on circulation includes the flat, less protective, masks that it employed in its testing. That claim, however, is difficult to square with Sirius XM’s own filings. For example, in its notice of a December 4, 2008 *ex parte* meeting with OET representatives, Sirius XM specifically acknowledged its awareness that the WCS Coalition’s proposed stepped mask is included in the draft order.⁷ Then, on December 11, 2008, Sirius XM submitted a letter to the Commission complaining that “Sirius XM’s understanding is that the Chairman’s draft order would modify the [OOBE] specifications

⁴ See Letter from Paul J. Sinderbrand, Counsel to WCS Coalition, to Marlene H. Dortch, FCC Secretary, WT Docket No. 07-293, at 1-2 (filed Feb. 21, 2009).

⁵ Sirius XM’s letter makes much of the fact that Southwest Research, Inc. (“SWRI”) has provided Sirius XM with a report that “replicates the road tests performed by Sirius XM and memorialized in our video to the FCC.” March 11, 2009 Pettit Letter, at 3. The testing conducted by SWRI, however, suffers all of the defects that the WCS Coalition has identified in the design and implementation of Sirius XM’s own testing. That Sirius XM and a company it has hired both perform poorly-designed tests and reach the same conclusion does not make that conclusion right.

⁶ Under this stepped mask, WCS mobile transmissions would be required to attenuate OOBE by 55+10 log (p) in the 2320-2324/2341-2345 MHz bands, by 61+10 log (p) in the 2324-2328/2337-2341 MHz bands, and by 67+10 log (p) in the 2328-2337 MHz band.

⁷ Letter from Robert Pettit, Counsel to Sirius XM, to Marlene H. Dortch, IB Docket No. 95-91 *et al.* at 1 (filed December 5, 2008)(“Sirius XM expressed its concern that the ‘stepped mask’ contained in the draft item, which is exactly the same as one that was originally submitted into the record by WCS interests, would not protect” its subscribers.).

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applicable to WCS mobile devices to a ‘stepped’ emissions mask” with the specific limits proposed by the WCS Coalition.⁸ In any event, whether Sirius XM failed to employ the stepped mask because of a legitimate misunderstanding or a cynical effort to “cook the books”, the key point is that use of the stepped mask we believe is included in the draft order will reduce interference as compared to the flat mask that Sirius XM used in its tests.

Sirius XM is disingenuous, at best, in claiming that the WCS Coalition said in its March 9th letter that the WCS Coalition “would refuse to participate in replicating the road tests that Sirius XM earlier submitted into the record.”⁹ A copy of the WCS Coalition’s letter is annexed for your convenience. As you can see, the WCS Coalition never said that it would refuse to participate in replicating those tests. What we did say was that given the disclosures that Sirius XM made at the March 6th meeting, we now question whether there is any benefit to replicating tests that were so ill-conceived in the first instance. Specifically, we noted that “[b]ecause it has become clear [at the March 6th meeting] that the test methodology employed by Sirius XM was substantially flawed and did not reflect a realistic simulation of how WCS mobile transmitters will perform, the WCS Coalition expressed concern that merely repeating the tests with Commission and WCS Coalition witnesses would not provide useful information for inclusion in the record.” We said at the meeting, and it remains true, that should OET seek to replicate Sirius XM’s flawed testing with the WCS Coalition in attendance, we will participate.

The problem, however, is that even with modifications (including, among other things, using the stepped OOB mask, avoiding signal leakage from the amplifier, accurately replicating the expected transmission patterns of WCS subscribers, testing operations on all WCS channels),¹⁰ the fundamental design of the Sirius XM tests is flawed because it does not permit realization of the benefits of transmit power control. The Commission has recognized, and the record in this proceeding reflects, that the mandatory use of transmit power control in WCS mobile devices will yield a material reduction in possible interference to Sirius XM because the overwhelming majority of time, those mobile devices will be operating at a fraction of their maximum power. Although the WCS Coalition has proposed from the beginning that all mobile transmitters employ transmit power control, and we understand that the draft order includes that requirement, Sirius XM choose not to incorporate transmit power control in its test design.

As we stated at the March 6th meeting, the WCS Coalition continues to believe that the best way to ascertain the likely results of adoption of the draft rules is to deploy an operational WCS network that comports with the OOB and other limits set forth in the draft order, will allow the benefits of transmit power control to be realized and will simulate how WCS

⁸ Letter from Robert Pettit, Counsel to Sirius XM, to Marlene H. Dortch, IB Docket No. 95-91 *et al.* at 2 (filed December 11, 2008).

⁹ March 11, 2009 Pettit Letter, at 1.

¹⁰ This list is far from exhaustive, and the WCS Coalition is prepared to work with OET and Sirius XM to develop the best possible test plan should OET elect to have the parties travel to New Jersey for additional testing.

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subscribers are likely to utilize the service. As those who participated in the March 6th meeting will recognize, Sirius XM mischaracterizes the discussion when it claims that the WCS Coalition committed within two weeks to develop and provide to the Commission and Sirius XM a full-blown test plan, equipment specifications and logistical details for such testing in Virginia. The WCS Coalition made no such commitment. Rather, we explained that we were exploring the possibility of conducting further testing close to Washington, but that it was not yet certain that we would be able to obtain and deploy the equipment necessary to run an operational WCS system in compliance with the technical specifications contained in the draft order, and explained some of the difficulties associated with deploying a test network.

Before the WCS Coalition can make an absolute commitment to further testing in Virginia, additional work remains to be done to assure that the testing can take place.¹¹ The WCS Coalition has been in discussions with the vendor best able to assist in obtaining and deploying such a system, and has identified an unaffiliated broadband system operator that we hope will be able to provide the network access and other support necessary for an operational network to be deployed in the northern Virginia suburbs. The WCS Coalition has made substantial progress, but the task is not trivial. And that is why the WCS Coalition was very careful not to make any absolute commitment at the March 6th meeting and why my *ex parte* notice correctly stated that we “agreed to explore further the possibility” of this sort of testing.

Pursuant to Sections 1.1206(b)(1) and 1.49(f) of the Commission’s Rules, this letter is being filed electronically with the Commission via the Electronic Comment Filing System. 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

¹¹ Among other things, we have begun coordination with a major WiMAX infrastructure vendor to secure 2.3 GHz base station equipment and technical support services for the testing. The vendor has responded positively to our request and is currently aligning their internal resources to support the project. We expect to receive confirmation of this vendor’s involvement by early next week. In addition, we have identified a broadband service provider located in the northern Virginia area (close enough to Washington that the travel burden on Commission staff will be minimal) who will allow us to install the network base station at its facility and integrate the base station into their WiMAX IP Core Network and Network Management System. This integration is necessary to make the base station fully functional (*i.e.*, capable of passing data traffic) so as to make the proposed tests as realistic as possible. Once we hear back from the infrastructure vendor we can confirm plans and support requirements with the service provider partner. NextWave intends to supply a prototype 2.3 GHz WiMAX modem for the tests. Prior to the actual field testing, it will be necessary for NextWave and the infrastructure vendor to complete over-the-air testing to ensure that the modem and base station interoperate. Limited software development may be necessary to facilitate sufficient interoperability.

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Attachment

cc: Julius Knapp
Jim Schlichting
Salomon Satche
Walter Johnston
Patrick Forster
Ahmed Lahjouji
Robert Weller
Alan Stillwell
Roger Noel
Linda Chang
Chip Fleming
Stephen Duall
Gardner Foster
Steve Martin
Robert Pettit

ATTACHMENT

March 9, 2009

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)*

NOTICE OF ORAL EX PARTE PRESENTATION

Dear Ms. Dortch:

I am writing pursuant to Section 1.1206(b)(2) of the Commission's Rules to notify the Commission that on Friday, March 6, 2009, Kurt Schaubach and Jennifer McCarthy of NextWave Broadband, Inc., Ron Olexa of Horizon Wi-Com, LLC, Doug Duet and Brian Benison of AT&T Inc., and Mary O'Connor of Wilkinson Barker Knauer, and I met on behalf of the WCS Coalition with Julius Knapp, Bob Weller, Salomon Satche, Walter Johnston, Patrick Forster, Ahmed Lahjouji, Steve Martin and Alan Stillwell of the Office of Engineering and Technology, James Schlichting, Roger Noel and Linda Chang of the Wireless Telecommunications Bureau, and Chip Fleming, Stephen Duall and Gardner Foster of the International Bureau to discuss the issues pending in the above-referenced proceedings regarding the coexistence of Satellite Digital Audio Radio Service ("SDARS") terrestrial repeaters and Wireless Communications Service ("WCS") wireless broadband systems in the 2305-2360 MHz band. Also in attendance were representatives of Sirius XM Radio Inc. ("Sirius XM").

During the course of the meeting, representatives of the WCS Coalition noted a series of flaws in the testing that led to Sirius XM's recent submission of a video purporting to establish the vulnerability of its SDARS receivers to interference from WCS mobile operations.¹ The WCS Coalition pointed out that the testing conducted by Sirius XM did not reflect "real world" operating conditions, and did little more than repeat the prior SDARS testing with all of its inherent flaws. Responding to questions from the WCS Coalition and Commission staff, Sirius

¹ See Letter from Robert L. Pettit, Counsel for Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 95-91, *et al* (filed Feb. 10, 2009).

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XM conceded that mobile device employed by Sirius XM in its testing did not comply with the stepped out-of-band emission limits that the WCS Coalition has proposed for all mobile devices, but instead utilized a spectral mask that placed greater emissions into the SDARS band than would be permitted under the WCS Coalition proposal. Sirius XM also admitted that the mobile device used in the testing did not employ transmit power control, which the WCS Coalition has proposed be required of all mobile devices and which the Commission has previously recognized substantially reduces the potential for interference. Sirius XM also admitted that no testing was conducted by Sirius XM over the A Block or upper B Block channels, which it conceded were less vulnerable to interference. In response to the statement by a Sirius XM representative that the test transmitter operated with a 25% duty cycle, the WCS Coalition pointed out that this was not representative of how a WCS mobile would likely operate. Sirius XM also admitted that it did not conduct the tests in a manner that would permit the Commission to ascertain how much, if any, of the purported interference actually was caused by out-of-band emissions. As a result, the testing does not illustrate a need for the onerous restrictions on out-of-band emissions proposed by Sirius XM. Indeed, the WCS Coalition noted that Sirius XM had implemented its test setup in such a manner that leakage from the power amplifier could have been a material contributor to the interference.

Because it has become clear that the test methodology employed by Sirius XM was substantially flawed and did not reflect a realistic simulation of how WCS mobile transmitters will perform, the WCS Coalition expressed concern that merely repeating the tests with Commission and WCS Coalition witnesses would not provide useful information for inclusion in the record. Rather, the WCS Coalition expressed the view, consistent with its prior statements, that the best way to ascertain the likely results of adoption of the rules being considered by the Commission is to deploy an operational WCS network and perform tests using a realistic simulation of how WCS subscribers are likely to utilize the service. The WCS Coalition agreed to explore further the possibility of doing so.

Pursuant to Sections 1.1206(b)(2) and 1.49(f) of the Commission's Rules, this letter is being filed electronically with the Commission via the Electronic Comment Filing System. 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

cc: Paul Murray
Renee Crittendon

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