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Before the
Federal Communications Commission
Washington, DC 20554

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In the Matter of WCS Wireless, LLC Request for Waiver of Section 27.50(a)
In the Matter of Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band

DA 05-1662

IB Docket No. 95-91

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Federal Communications Commission
Office of Secretary

CONSOLIDATED REPLY COMMENTS OF XM RADIO INC.

XM Radio Inc. ("XM") hereby submits its reply to the comments filed in response to the request of WCS Wireless, LLC ("WCSW") that the power limits of its transmitters be measured in terms of average power rather than peak power. The only opposition is based on an unfounded concern that grant of WCSW's waiver will increase the potential for interference to adjacent channel operations. In fact, WCSW has not requested any change in the limits on out-of-band emissions. A straightforward technical analysis demonstrates that, applying the existing WCS out-of-band emission rules, the out-of-band emission limits remain the same regardless of the in-band power. In other words, as a legal and technical matter, a grant of WCSW's waiver request will have absolutely no impact on the potential for adjacent channel interference due to out-of-band emissions.

XM's interest in this proceeding stems from both the operation of its own satellite radio system, which uses channels adjacent to WCSW, and its recent decision to acquire the WCS

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licenses in order to provide mobile multimedia services. *See* Attachment A. In its initial comments, XM joined with Sirius Satellite Radio Inc. in recognizing that “the peak power limitation is unduly restrictive, that it limits the coverage and capacity of WCS systems, and that there is no corresponding benefit associated with the use of peak power.” *See* Joint Comments of Sirius and XM, DA 05-1662 (July 5, 2005), at 2. The Joint Comments further noted that “average power definition . . . is preferred from both an operational and a verification measurement standpoint.” *Id.*

As the prospective transferee of certain WCS licenses, XM recognizes the critical importance to deploying a network as efficiently as possible to serve as many people as possible. Unnecessary restrictions on the measurement of transmitter power will force WCSW to reduce its coverage. Particularly for a new service, such unnecessary restrictions are highly problematic.

None of the comments that were filed expressed concern with any possibility of interference other than to adjacent channel users and only in terms of out-of-band emissions.¹ With respect to this one issue, the concerns relate to the alleged insufficiency of WCSW’s discussion of the potential for interference to immediately adjacent WCS licensees. *See, e.g.*, WCA Opposition at 3. In that regard, the commenters seem to have misunderstood the scope of the WCSW waiver request. Commenters, simply but erroneously, assume that any potential increase in in-band power limits – even as negligible as the increase resulting from the grant of WCSW’s waiver petition -- will result in an increase in out-of-band emissions limits, and

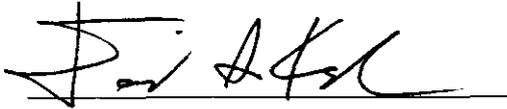
¹ Opposition to Amended Request for Waiver, Wireless Communications Association International, Inc. (“WCA”), DA 05-1662 (July 5, 2005); Joint Comments of Allegheny Communications and Central States Communications, Inc. (“Allegheny/Central States”), DA 05-1662 (July 5, 2005); Comments, BellSouth Wireless Cable, Inc. (“BellSouth”), DA 05-1662 (July 5, 2005).

therefore, presents increased risk of interference to adjacent WCS licensees. As XM understands it, however, WCSW is not requesting any change in either the out-of-band emission limits or the measurement technique for determining out-of-band emission levels. The existing limit of $43 + 10\log(p)$ dB will continue to apply. 47 C.F.R. § 27.53(a)(3). Moreover, as discussed in the attached Technical Appendix, the application of that limit will prevent grant of the waiver from causing any change in the existing out-of-band power limits. Moreover, the Commission's rules for measuring out-of-band emissions in effect average the in-band power. 47 C.F.R. § 27.53(a)(4). This is yet another demonstration that grant of WCSW's waiver request will have absolutely no impact on potential interference from out-of-band emissions, because it would not permit any higher out-of-band emissions than existing rules and measurement techniques allow today.

BellSouth and Allegheny/Central States express concern that WCSW did not conduct field tests to prove empirically that the use of average power would not cause interference to adjacent channel WCS operations. *See* Comments of BellSouth; Joint Comments of Allegheny/Central States at 3. It is clear, however, that WCSW performed reasonably comprehensive tests with commercially available services. It tested with immediately adjacent SDARS licensees – specifically XM service in Dallas, Texas – and was able to determine that there was no meaningful interference to satellite radio service. It is understandable that WCSW would have difficulty testing empirically with BellSouth, Allegheny, or Central States given our understanding that none of these licensees are providing commercial services using their respective WCS licenses, despite having held the licenses in some cases for over eight years. Thus, even if there had been a reason for WCSW to collect empirical evidence, it would have been impractical at best to do so. In any event, as discussed above, such tests are unnecessary

here, since grant of the waiver will have no impact on the existing limit on out-of-band emissions in adjacent WCS channels – the only objection raised by commenters – if and when they do choose to deploy facilities and begin operations.

Respectfully submitted,



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July 15, 2005

Attachment A

Please use your browser's print function to print this page, then click the back button to return to XM.



PRESS RELEASES

XM SATELLITE RADIO TO ACQUIRE WCS WIRELESS

Washington D.C. , July 13, 2005 -- XM Satellite Radio (NASDAQ: XMSR), the nation's leading satellite radio company with more than 4.4 million subscribers, today announced that it has signed an agreement to acquire WCS Wireless, a private entity, for 5.5 million shares of XM Common Stock.

The principal assets of WCS Wireless are wireless spectrum licenses in geographic areas covering 163 million people throughout the United States, including 15 of the top 20 metropolitan markets. On average, WCS Wireless licenses include 10 megahertz in the frequency bands adjacent to XM's satellite radio service. XM and WCS Wireless expect to close the transaction before the end of the year, subject to necessary government approvals.

XM's acquisition of WCS Wireless provides XM an exceptional opportunity to expand its existing business with a variety of multimedia subscription services, including innovative video and data offerings, transmitted over these new frequencies. XM expects to announce more detailed plans for the use of this additional spectrum in the future.

About XM Satellite Radio

XM is America's number one satellite radio service with more than 4.4 million subscribers. Broadcasting live daily from studios in Washington, DC, New York City and Nashville at the Country Music Hall of Fame, XM's 2005 lineup includes more than 150 digital channels of choice from coast to coast: commercial-free music channels, premier sports, talk, comedy, children's and entertainment programming; and advanced traffic and weather information. XM was named Best Radio Service at the 2004 Billboard Digital Entertainment Awards.

XM, the leader in satellite-delivered entertainment and data services for the automobile market through partnerships with General Motors, Honda, Toyota, Hyundai, Nissan and Volkswagen/Audi, is available in more than 120 different vehicle models for 2005. XM's industry-leading products are available at consumer electronics retailers nationwide. For more information about XM hardware, programming and partnerships, please visit <http://www.xmradio.com>.

Factors that could cause actual results to differ materially from those in the forward-looking statements in this press release include demand for XM Satellite Radio's service, the Company's dependence on technology and third party vendors, its potential need for additional financing, as well as other risks described in XM Satellite Radio Holdings Inc.'s Form 10-K filed with the Securities and Exchange Commission on 3-4-05. Copies of the filing are available upon request from XM Radio's Investor Relations Department.

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Technical Appendix

The Part 27 out-of-band emissions rule states that the limit into the adjacent WCS band must be attenuated by $43 + 10\log(p)$ dB. This equation normalizes the limit so that at any EIRP level the out-of-band emissions remains constant.

For example, at 2000 watts EIRP this converts to dBw using the following equation:

$$\text{EIRP dBw} = 10 * \log(2000) = +33\text{dBw EIRP}$$

The attenuation level is calculated as:

$$\text{Attenuation in dB} = 43\text{dB} + 33\text{dB} = 76\text{dB}$$

The out-of-band emissions level is calculated as:

$$+33\text{dBw} - 76\text{dB} = -43\text{dBw} = -13\text{dBm}$$

For example, at 200 watts EIRP this converts to dBw using the following equation:

$$\text{EIRP dBw} = 10 * \log(200) \text{ or } +23\text{dBw EIRP}$$

The attenuation level is calculated as:

$$\text{Attenuation in dB} = 43\text{dB} + 23\text{dB} = 66\text{dB}$$

The out-of-band emissions level is calculated as:

$$+23\text{dBw} - 66\text{dB} = -43\text{dBw} = -13\text{dBm}$$

This example clearly shows that for any given EIRP the current rule requires the same out-of-band emissions level.

Technical Certification

I, Craig Wadin, an engineer employed by XM Radio Inc., certify under penalty of perjury that:

I am the technically qualified person with overall responsibility for the technical information contained in these Reply Comments. I am familiar with the requirements of Part 27 of the Commission's rules, and the information contained in the Reply Comments is true and correct to the best of my knowledge and belief.



Craig Wadin

Dated: July 15, 2005

CERTIFICATE OF SERVICE

I, Angela Green, a secretary with the law firm of Pillsbury Winthrop Shaw Pittman LLP, hereby certify that on this 15th day of July 2005, served a true copy of the foregoing "Consolidated Reply" by first-class United States mail, postage prepaid, upon the following:

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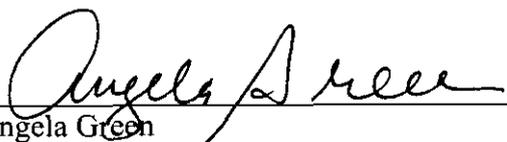
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