

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of Application by )  
 )  
XM RADIO LLC ) Call Sign S2786  
 )  
For Special Temporary Authority to )  
Perform Tests with XM-5 )

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

XM Radio LLC (“XM Radio”) respectfully requests space station special temporary authority (“STA”) for a period of 30 days commencing on May 5, 2021, to permit testing of XM-5, an in-orbit spare satellite digital audio radio service (“SDARS”) spacecraft at 85.15° W.L., using the Wireless Communications Service (“WCS”) spectrum immediately adjacent to the SDARS band, 2315-2320 MHz (“WCS C Block”) and 2345-2350 MHz (“WCS D Block”). As discussed herein, grant of the requested STA will serve the public interest by allowing XM Radio to evaluate XM-5’s performance in the WCS C and D Block frequencies.

The XM-5 space station at 85.15° W.L. is authorized to operate throughout the SDARS frequencies, 2320-2345 MHz.<sup>1</sup> The satellite’s design characteristics enable operations in the WCS frequencies adjacent to the SDARS band, and Sirius XM proposes to perform testing to confirm the satellite’s performance in this spectrum. Use of these frequencies for SDARS is consistent with Commission rules. Specifically, Section 27.2(c) states that SDARS “may be

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<sup>1</sup> See XM Radio LLC, Call Sign S2786, File No. SAT-MOD-20180831-00065, granted Nov. 1, 2018 (the “XM-5 License”).

provided using the 2310-2320 and 2345-2360 MHz bands . . . in a manner consistent with part 25 of this chapter.”<sup>2</sup>

XM Radio’s affiliate Sirius XM Radio Inc. has entered into an agreement with AT&T Mobility Spectrum LLC and other affiliated entities (collectively, “AT&T”), which hold WCS licenses for the C and D Block frequencies, to acquire those licenses, and the Commission has approved the license assignments.<sup>3</sup> Pending consummation of the assignments, AT&T has agreed to permit XM Radio to perform the XM-5 testing in this spectrum.

The planned testing in the WCS C Block and WCS D Block bands will conform to the XM-5 License with respect to operating parameters, including power levels and emission designators. The uplink signals for the testing will originate from earth stations that are authorized to communicate with XM-5 and will use the licensed SDARS feeder link spectrum in the 7025-7075 MHz X-band. The downlink signals will be received by U.S. earth stations on an unprotected basis.

Testing XM-5 in these frequencies will not adversely affect any other party. As discussed above, AT&T holds Commission licenses for the WCS C Block and WCS D Block bands, and AT&T has agreed to allow the proposed transmissions.<sup>4</sup> XM Radio operates the only satellites authorized to use either S-band or X-band frequencies located within two degrees of

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<sup>2</sup> 47 C.F.R. § 27.2(c).

<sup>3</sup> See *Sirius XM Radio Inc.*, ULS File Nos. 0009368515, 0009368531, and 0009368523 (consented to Jan. 19, 2020).

<sup>4</sup> In addition to the AT&T licenses, which cover the contiguous United States, RigNet SatCom, Inc. (“RigNet”) holds WCS licenses for the Gulf of Mexico, and Liberty Latin America (“Liberty”) entities hold WCS licenses for Puerto Rico and the U.S. Virgin Islands. XM Radio has advised RigNet and Liberty of its XM-5 testing plans and shared with RigNet an analysis demonstrating that the testing will not cause harmful interference to its operations. XM Radio’s understanding is that Liberty is not operating in the WCS C Block and WCS D Block bands.

85.15° W.L. XM Radio does not share S-band spectrum with other satellite systems (except its affiliates, Sirius XM Radio Inc. and Satellite CD Radio LLC), and these frequencies are not subject to two degree spacing rules. Because XM-5 is currently acting as a spare satellite and is not actively used for delivery of SDARS signals to customers, the testing will not affect XM Radio's service to subscribers.

The proposed testing also will not result in harmful interference to regularly authorized terrestrial operations. The uplink earth stations that will be used for the testing have been coordinated with terrestrial licensees. XM Radio will not exceed the previously-coordinated power density parameters during the proposed testing. In addition, and in any event, XM Radio will conduct all testing on a non-harmful interference basis, and will cease transmissions promptly in the event any harmful interference is caused by such operations.

XM Radio hereby certifies that no party to this application is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

For the foregoing reasons, XM Radio respectfully requests special temporary authority for a period of 30 days commencing on May 5, 2021, to conduct testing as described herein. Grant of the requested authority will serve the public interest by facilitating XM Radio's ability to evaluate the performance of the XM-5 space station in the WCS C Block and WCS D

Block bands and will not result in harmful interference to any other regularly authorized operations.

Respectfully submitted,

XM Radio LLC

/s/ Patrick L. Donnelly

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Secretary

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