

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

In the Matter of Application by )  
 )  
XM RADIO INC. ) Call Sign S2786  
 )  
For Special Temporary Authority to )  
Activate XM-5 )

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

By this application, XM Radio Inc. (“XM Radio”),<sup>1</sup> respectfully requests special temporary authority (“STA”) for a period of up to 30 days, commencing January 13, 2011, to permit XM Radio to activate the communications payloads of its XM-5 satellite at 85.2° W.L. XM-5 is a recently-launched in-orbit spare spacecraft. XM Radio proposes to transmit for a limited period using XM-5 in lieu of XM-3, one of XM Radio’s primary operating spacecraft, for testing purposes. Grant of the requested authority will permit XM Radio to evaluate the performance of XM-5 to provide replacement capacity in the event XM-5 is needed for primary service to respond to an outage.

XM-5 was launched on October 14, 2010, and is authorized to serve as an in-orbit spare for XM Radio’s fleet of satellite digital audio radio service (“SDARS”) spacecraft that provide a high-quality, continuous, multi-channel audio service throughout the United States.<sup>2</sup> XM-5 is also equipped with frequencies allowing it to serve as back-up capacity for the SDARS

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<sup>1</sup> XM Radio is a wholly-owned subsidiary of Sirius XM Radio Inc. (“Sirius XM”).

<sup>2</sup> See File No. SAT-LOA-20090217-00025 (Call Sign S2786), grant-stamped Aug. 31, 2009.

services of XM Radio's affiliate, Satellite CD Radio.<sup>3</sup> The XM-5 license authorizes activation of the satellite's communications payloads only "in the event of a service outage of the XM-3 (Call Sign: S2617), XM-4 (Call Sign: S2616), FM-1, FM-2, FM-3 (Call Sign: S2105), or FM-5 (Call Sign: S2710) space stations."<sup>4</sup>

Immediately following launch, XM Radio performed a series of in-orbit payload tests of XM-5 while the satellite was temporarily located at 80° W.L. to assess the spacecraft's performance characteristics.<sup>5</sup> Now that XM-5 is positioned at 85.2° W.L., its licensed location adjacent to XM-3's position at 85.083° W.L., XM Radio proposes to test XM-5's performance in a situation that accurately tracks the conditions that would apply in the event XM-5 was needed to restore capacity because of a problem with XM-3. By performing these tests, XM Radio will be better prepared if a future outage requires activation of the XM-5 satellite.

During the testing period, XM Radio's existing feeder link earth stations in Washington, D.C. (Call Sign E000158) and Ellenwood, GA (Call Sign E040204) will transmit

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<sup>3</sup> *See id.*

<sup>4</sup> *Id.*, Attachment at ¶ 2.

<sup>5</sup> *See* File No. SAT-STA-20100917-00194, grant-stamped Oct. 22, 2010 (authorizing positioning of XM-5 at 80° W.L., testing at that location, and drift to 85.2° W.L. following completion of testing).

programming to XM-5 rather than to XM-3.<sup>6</sup> The temporary change is expected to have no impact on listeners of XM Radio's satellite radio network.<sup>7</sup>

The proposed testing will not cause harmful interference to the operations of any other spacecraft. There are no satellites using either S-band or X-band frequencies within two degrees of 85.2° W.L. XM Radio does not share S-band spectrum with other satellite systems (except its affiliate, Satellite CD Radio), and the SDARS downlink frequencies are not subject to two degree spacing rules.

The proposed testing will also not result in harmful interference to regularly authorized terrestrial operations. The feeder link earth stations that will be communicating with XM-5 have been coordinated with terrestrial licensees for the frequencies and EIRP levels proposed for use here, and the coordination covers a range of orbital locations that includes 85.2° W.L.<sup>8</sup> XM Radio will not exceed the previously-coordinated parameters during the proposed testing; its feeder link earth stations will simply be communicating with XM-5 for a brief period instead of the neighboring XM-3 spacecraft.

For the foregoing reasons, XM Radio respectfully requests special temporary authority for a period of up to 30 days commencing January 13, 2011 to activate the XM-5

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<sup>6</sup> XM Radio has sought modification of the licenses for the feeder link sites in order to add XM-5 at 85.2° W.L., among other changes. *See* File Nos. SES-MOD-20101022-01323 (E000158) & SES-MOD-20101022-01324 (E040204). Those applications appeared on public notice as accepted for filing on November 24, 2010, *see* Report No. SES-01297 (Nov. 24, 2010) at 9-11, and no party filed comments on the applications.

<sup>7</sup> This test involves only temporary substitution of XM-5 for XM-3 using the SDARS frequencies assigned to XM-3. XM Radio is not seeking authority here to operate XM-5 on the frequencies assigned to the Satellite CD Radio fleet.

<sup>8</sup> *See* Exhibit B to File Nos. SES-MOD-20101022-01323 (E000158) & SES-MOD-20101022-01324 (E040204).

communications payloads to provide service in lieu of XM-3. 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 and will not result in harmful interference to any other regularly authorized operations.

Respectfully submitted,

XM Radio Inc.

/s/ James S. Blitz

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January 3, 2011