

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

In the Matter of Application by )  
 )  
XM RADIO LLC ) Call Signs S2118, S2119 & E040204  
 )  
For Special Temporary Authority to )  
Conduct Testing of XM-1 and XM-2 )

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

By this application, XM Radio LLC (“XM Radio”)<sup>1</sup> respectfully requests special temporary authority (“STA”) for a period of up to 30 days commencing November 7, 2011 to permit XM Radio to perform tests to measure the performance of its XM-1 and XM-2 satellites using XM Radio’s Ellenwood, GA feeder link earth station. XM-1 and XM-2 are in-orbit spare spacecraft that are currently positioned at 115.25° W.L. +/- 0.1 degrees, where they fly in formation with XM-4. XM Radio proposes to test XM-1 and XM-2 to measure their performance and evaluate their continuing ability to provide back-up capacity in the event of an anomaly affecting XM-4, one of XM Radio’s primary operating spacecraft. The call signs of the space stations and earth station for which STA is requested are listed in the caption above.

XM-1 and XM-2 are authorized to serve as in-orbit spares 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> The XM-1 and XM-2

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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 Nos. SAT-MOD-20101216-00262, grant-stamped Mar. 8, 2011 (“XM-1 Grant”); SAT-MOD-20101001-00205, grant-stamped Nov. 9, 2010 (“XM-2 Grant”).

licenses authorize activation of the satellite's communications payloads only "in the event of a service outage of the XM-3 or XM-4 space stations (Call Signs S2617 and S2616)."<sup>3</sup>

XM Radio seeks to conduct tests to verify the performance of XM-1 and XM-2 at their current orbital location in order to be better prepared if a future anomaly affecting the XM-4 operating satellite requires activation of these satellites. The tests will allow XM Radio to evaluate the accuracy of the satellites' antenna pointing mechanism.

During the testing period, XM Radio's existing feeder link earth station in Ellenwood, GA (Call Sign: E040204) will alternately transmit to XM-1 and XM-2.<sup>4</sup> Testing will use the frequencies for which that earth station and XM-1 and XM-2 are authorized. The testing transmissions from the feeder link earth station will use an unmodulated carrier operating at or below the earth station's maximum authorized EIRP. In all other respects, the transmissions for purposes of testing will conform to the technical specifications of the earth station license.

The temporary testing is expected to have no impact customers receiving XM Radio's satellite radio transmissions. Furthermore, the testing will not cause harmful interference to the operations of any other spacecraft. No satellites using either S-band or X-band frequencies operate within two degrees of 115.25° W.L., other than satellites licensed to XM Radio and commonly owned entities. 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 testing will not result in harmful interference to regularly authorized terrestrial operations. The feeder link earth station that will communicate with XM-1 and XM-2

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<sup>3</sup> See XM-1 Grant, Attachment at ¶ 2; XM-2 Grant, Attachment at ¶ 3.

<sup>4</sup> This earth station is authorized to communicate with XM-1 and XM-2 at their current location. See File No. SES-MOD-20101022-01324, granted Jan. 4, 2011.

has been coordinated with terrestrial licensees for the frequency and EIRP level proposed for use here, and the coordination arc included the 115.25° W.L. orbital location.<sup>5</sup> XM Radio will not exceed the previously coordinated parameters during the proposed testing.

For the foregoing reasons, XM Radio respectfully requests special temporary authority for a period of up to 30 days commencing November 7, 2011 to perform tests to measure the performance of its XM-1 and XM-2 satellites using XM Radio's Ellenwood, GA feeder link earth station. Grant of the requested authority will serve the public interest by facilitating XM Radio's ability to evaluate the performance of the XM-1 and XM-2 space stations and will not result in harmful interference to any other regularly authorized operations.

Respectfully submitted,

XM Radio LLC

/s/ James S. Blitz

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October 11, 2011

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<sup>5</sup> See Exhibit B to File No. SES-MOD-20101022-01324 (E040204).