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"),[1] respectfully requests special temporary authority ("STA") for a period of up to 30 days, commencing July 15, 2011 to permit XM Radio to activate the communications payloads of its XM-5 satellite at 85.15º W.L. XM-5 is an in-orbit spare spacecraft launched in October 2010. For testing purposes, 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. Grant of the requested authority will permit XM Radio to evaluate the performance of XM-5 and its ability to provide replacement capacity in the event XM-5 is needed for primary service in response to an anomaly in XM-3 operation.

XM-5 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.[2] XM-5 is also equipped with frequencies allowing it to serve as back-up capacity for the SDARS services of XM Radio's affiliate,

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[1] XM Radio is a wholly-owned subsidiary of Sirius XM Radio Inc. ("Sirius XM"). On June 17, 2011, XM Radio applied for a *pro forma* assignment of this station's license from XM Radio Inc. to XM Radio LLC. *See* File No. SAT−ASG−20110617−00111.

[2] *See* File No. SAT-LOA-20090217-00025 (Call Sign S2786), grant-stamped Aug. 31, 2009.

Satellite CD Radio.[3] 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."[4]

Immediately following launch, XM Radio performed a series of in-orbit payload tests of XM-5 while the satellite was temporarily located at 80º W.L. to assess the spacecraft's performance characteristics.[5] Further tests were performed earlier this year when XM-5 was positioned at 85.2º W.L., adjacent to XM-3's position at 85.083º W.L.[6] Subsequent to those tests, the Commission granted XM Radio's request to modify the XM-5 license to permit operation of XM-5 and XM-3 in formation centered at 85.15º W.L. with a +/- 0.1 degree east-west stationkeeping tolerance.[7]

XM Radio now proposes to conduct further tests of XM-5's performance under the conditions that would apply in the event XM-5 was needed to restore capacity because of an anomaly affecting XM-3. The tests will be similar to those conducted in January, but will involve a more extensive effort to measure customer service availability at various locations in the U.S. and will also take into account attenuation due to foliage at some sites. By performing these tests, XM Radio will be better prepared if a future outage requires activation of the XM-5 satellite.

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[3] *See id.*

[4] *Id.*, Attachment at ¶ 2.

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

[6] *See* File No. SAT-STA-20110103-00001, grant-stamped Jan. 13, 2011.

[7] *See* File Nos. SAT-MOD-20101216-00264, grant-stamped Mar. 8, 2011 (XM-5 modification grant); SAT-MOD-20101216-00263, grant-stamped Mar. 8, 2011 (XM-3 modification grant).

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 programming to XM-5 rather than to XM-3.[8] The temporary change is expected to have no impact on listeners of XM Radio's satellite radio network.[9]

The proposed testing will not cause harmful interference to the operations of any other spacecraft. No other satellites using either S-band or X-band frequencies operate within two degrees of 85.15° 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 communicate with XM-5 have been coordinated with terrestrial licensees for the frequencies (7064.015 MHz and 7068.395 MHz) and EIRP levels proposed for use here, and the coordination covers a range of orbital locations that includes 85.15° W.L.[10] 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 collocated XM-3 spacecraft.

For the foregoing reasons, XM Radio respectfully requests special temporary authority for a period of up to 30 days commencing July 15, 2011 to activate the XM-5

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[8] Both these earth stations are authorized to communicate with XM-5 at its current location. *See* File Nos. SES-MOD-20101022-01323 (E000158) & SES-MOD-20101022-01324 (E040204), both grant-stamped Jan. 4, 2011.

[9] This test involves only temporary substitution of XM-5 for XM-3 using their assigned SDARS frequencies. XM Radio is not seeking authority here to operate XM-5 on the frequencies assigned to the Satellite CD Radio fleet.

[10] *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 confirm 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.

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