

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

In the Matter of Application by)
)
XM RADIO INC.) Call Signs S2118, S2119 & E040204
)
For Special Temporary Authority to)
Perform Test Transmissions)

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

By this application, XM Radio Inc. (“XM Radio”), respectfully requests space station and earth station special temporary authority (“STA”) for a period of up to 30 days, commencing on August 16, 2010, to permit XM Radio to perform test transmissions using its Ellenwood, Georgia earth station and its XM-1 and XM-2 spacecraft at their nominal 85° W.L. orbital location. The call signs of the space station and earth stations for which STA is requested are listed in the caption above.

XM Radio currently operates a fleet of four satellite digital audio radio service (“SDARS”) spacecraft that provide a high-quality, continuous, multi-channel audio service throughout the United States. XM-1 and XM-2 are collocated with XM-3 at the nominal 85° W.L. orbital location, and XM-4 is positioned at 115° W.L. XM-3 and XM-4 are the primary operational spacecraft for the fleet, and XM-1 and XM-2 are authorized to serve as in-orbit spares that can be activated in the event of an outage on either of the primary spacecraft.¹

XM Radio has been granted a license for XM-5, a new spacecraft that will be positioned at the nominal 85° W.L. orbital location and will serve as an in-orbit spare for the

¹ See File Nos. SAT-MOD-20070912-00124; SAT-AMD-20071113-00157; SAT-AMD-20080129-00031 (Call Sign S2118) and SAT-MOD-20070911-00123; SAT-AMD-20071113-00158; SAT-AMD-20080129-00032 (Call Sign S2119), all grant-stamped Feb. 14, 2008).

operations of both the XM Radio fleet and the services provided by XM Radio's affiliate, Satellite CD Radio.² Launch of XM-5 is scheduled for later this year, and XM Radio intends to test the spacecraft using its Ellenwood, Georgia earth station. In order to prepare for in-orbit testing ("IOT") of XM-5, XM Radio seeks authority to perform a rehearsal, sending signals from the Ellenwood, Georgia earth station to XM-1 and XM-2.

The test transmissions will use the frequencies for which the Ellenwood earth station and XM-1 and XM-2 are authorized, with uplinks in the X-band, 7056.8450-7074.8690 MHz, and downlinks in the S-band, 2332.5-2345.0 MHz. The transmissions will include intermittent use of an unmodulated carrier operating at the earth station's maximum authorized EIRP of 78 dBW.

The proposed testing will not cause harmful interference to the operations of any other spacecraft. The uplink frequencies used for the test transmissions will be translated in the satellites to the portion of the S-band frequencies used for terrestrial repeaters, so no interference with operational service through the XM-3 and XM-4 satellites will occur. There are no satellites using either S-band or X-band frequencies within two degrees of the nominal 85° W.L. orbital location, other than satellites operated by XM Radio. 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 Ellenwood, Georgia earth station is fully coordinated with terrestrial licensees for the frequencies, orbital arc, and EIRP levels proposed for use in the testing, and XM Radio will not exceed the previously-coordinated parameters during the

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

proposed testing. In addition, and in any event, XM Radio will conduct all IOT 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 up to 30 days commencing on August 16 to perform IOT rehearsal test transmissions using its Ellenwood, Georgia earth station and XM-1 and XM-2 satellites. Grant of the requested authority will serve the public interest by facilitating XM Radio's ability to evaluate the performance of its space stations 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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