

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

In the Matter of)
)
SATELLITE CD RADIO, INC.) File No. SAT-LOA-2010_____)
)
Application for Authority to Launch and)
Operate the FM-6 Satellite)
)
)

**APPLICATION FOR AUTHORITY TO LAUNCH AND
OPERATE THE FM-6 SATELLITE**

Satellite CD Radio, Inc., a wholly-owned subsidiary of Sirius XM Radio Inc. (together “Sirius XM”), pursuant to Sections 25.114 and 25.144 of the Federal Communications Commission’s (“FCC” or “Commission”) rules,¹ hereby applies to launch and operate a satellite, to be known as FM-6, at the 115.2° W.L. orbital location. The FM-6 satellite will be a geostationary orbit (“GSO”) satellite and, in conjunction with FM-5, eventually will replace Sirius XM’s non-geostationary satellite orbit (“NGSO”) constellation (call sign S2105).

As demonstrated below, Sirius XM is legally and technically qualified to launch and operate the proposed satellite. Moreover, grant of this application will serve the public interest by ensuring that Sirius XM’s millions of consumers continue to receive exceptional satellite radio service, coverage and redundancy. In accordance with the requirements of the Commission’s rules,² this application has been filed electronically as an attachment to FCC Form 312. Pursuant to Section 25.114 of the Commission’s rules, Sirius XM provides technical

¹ 47 C.F.R. §§ 25.114 and 25.144.

² 47 C.F.R. § 25.114(c).

information relating to the requested satellite license on Schedule S and in narrative form in Attachment A (Technical Description).

I. AUTHORITY REQUESTED AND SCHEDULE FOR IMPLEMENTATION

Sirius XM currently operates three NGSO satellites (*i.e.*, FM-1, FM-2 and FM-3 licensed under call sign S2105) and one GSO satellite at 96° W.L. (*i.e.*, FM-5 licensed under call sign S2710). In September 2008, the Commission authorized Sirius XM to launch and operate another NGSO satellite (*i.e.*, FM-6 licensed under call sign S2105).³

Rather than launching and operating the FM-6 satellite as an NGSO satellite, Sirius XM now seeks authority to launch and operate the FM-6 satellite as a geostationary satellite at the 115.2° W.L. orbital location.⁴ Upon receiving this FCC approval, Sirius XM would no longer hold an authorization to construct, launch, or operate FM-6 as part of Sirius XM's NGSO constellation. Thus, in granting authority for Sirius XM to launch and operate the FM-6 as a GSO satellite, Sirius XM requests that the Commission state that Sirius XM is no longer obliged to launch and operate the previously authorized FM-6 NGSO satellite.⁵

Sirius XM expects to launch the FM-6 GSO satellite in the fourth quarter of 2011; the satellite should become operational in early 2012.

II. GRANT OF THIS APPLICATION IS IN THE PUBLIC INTEREST

Grant of this application will serve the public interest. Deploying FM-6 at the 115.2° W.L. orbital location will ensure that Sirius XM's millions of consumers continue to receive exceptional satellite radio service, coverage and redundancy. As shown in the Technical

³ *Application to Modify NGSO Authorization for FM-6 Satellite*, File No. SAT-MOD-20080521-00110 (stamp grant Sept. 17, 2008).

⁴ This is the same nominal orbital location occupied by the XM-4 satellite, which is licensed to XM Radio Inc. XM Radio Inc. and Satellite CD Radio, Inc. are both subsidiaries of Sirius XM Radio Inc.

⁵ *See supra* note 3.

Appendix, the GSO operation of the FM-6 satellite will provide the same geographic coverage to customers as the previously planned NGSO satellite. Moreover, the FM-6 satellite will be launched and made operational in advance of the anticipated retirement of the existing NGSO constellation to ensure that there are no gaps in satellite radio service for customers.

Approval to operate FM-6 as a GSO satellite also serves the public interest because it will enable Sirius XM to co-locate the newest satellites in its fleet with the existing XM operational constellation. This concentration of orbital assets will provide Sirius XM with technical and operational synergies, and it will facilitate integrating the Sirius XM and XM satellite networks. Converting the FM-6 satellite to a GSO satellite is simplified by the fact that the basis of this satellite's design was the same as that for the FM-5 GSO satellite. Moreover, the decision to change FM-6 to GSO was made early in the satellite's construction. Other than eliminating highly elliptical orbit ("HEO") motors and gears to drive the antennas and re-optimization of the antenna pattern, the only major conversion change was in the flight software, which required no hardware change.

Moreover, operating FM-6 as a GSO satellite presents no significant interference issues. Regardless of whether the satellite operates as a GSO or NGSO satellite, FM-6 will transmit in the 2320.0-2332.5 MHz DARS downlink band, which Sirius won and paid for at auction, gaining the exclusive U.S. license in that spectrum. Thus, there are no United States co-frequency users of the FM-6 downlink transmissions. Similarly, the FM-6 satellite uplink will share the same X-band frequencies (7050.5-7072.5 MHz) as the present Sirius constellation, transmitting from a primary earth station nearby the existing feeder link antennae. FM-6 tracking, telemetry and control also will be accomplished "in band," in S-Band and X-band spectrum already licensed to Sirius XM. As shown in Attachment A, Sirius XM's out-of-band emissions will comply with the Commission's rules, and will not cause interference to users in the adjacent frequency bands.

The FM-6 satellite is also designed to, and will, operate in compliance with all relevant international and bilateral agreements between the United States and the Administrations of Canada and the United Mexican States regarding the provision of satellite radio in North America. Sirius XM certifies that prior to commencing operations on FM-6, Sirius XM will confirm to the Commission that the Administrations of Canada and the United Mexican States have been notified of and concur with the operating parameters of the FM-6 satellite. Because Sirius XM and the United Mexican States and Canada have recently agreed upon operating parameters for the GSO FM-5 satellite, concurrence regarding the proposed FM-6 operations should be easily obtained.

Finally, granting this request to operate the FM-6 satellite as a GSO satellite would be consistent with Commission precedent. In order to promote competition, flexibility, and technical innovation, the FCC historically entrusts spacecraft design decisions to the system operators insofar as possible consistent with basic regulatory objectives.⁶ Thus, when reviewing new or modified designs, the Commission “consistently” approves the design where “the proposed modifications present no significant interference problem and are otherwise consistent with Commission policies.”⁷ As an example, in 2003, the FCC allowed Boeing to modify its initial satellite system design from an NGSO configuration to a single GSO satellite.⁸

III. ITU FILINGS AND COST RECOVERY

Sirius XM will comply with applicable ITU policies and procedures for the FM-6

⁶ *ICO Satellite Services G.P., Application for Modification of 2 GHz LOI Authorization, Petition for Declaratory Ruling or Waiver, Memorandum Opinion and Order, 20 FCC Rcd 9797, 9800 (¶ 11) (Int’l Bur. 2005).*

⁷ *Id.*

⁸ *Applications of The Boeing Company For Modification of Authority For Use of the 1990-2025/2165-2200 MHz and Associated Frequency Bands for a Mobile-Satellite System, Order and Authorization, 18 FCC Rcd 12317, 12331 (¶ 36) (Int’l Bur. 2003).*

satellite's modified orbit. Internationally, coordination of the 2320-2332.5 MHz band is subject to the cost-recovery procedures in Appendix 33 of the ITU Radio Regulations.⁹ Sirius XM is aware that the ITU currently assesses processing fees for satellite filings, and that Commission applicants are responsible for any and all such ITU fees.¹⁰ Sirius XM will prepare all necessary information for submission to the ITU so that it may initiate and complete the advance publication, international coordination, due diligence, and notification process of its space stations, in accordance with ITU Radio Regulations.

IV. REQUEST FOR GRANT ON A STREAMLINED BASIS WITHOUT MILESTONES OR A BOND

Sirius XM urges the Commission to grant this application on a streamlined basis using its “grant-stamp” procedure, as it did with Sirius XM’s FM-5 application.¹¹ Streamlined processing would be appropriate because the Commission does not apply “first come, first served” processing or modified processing rounds to satellite radio applications.¹²

In addition, the FCC should approve the FM-6 satellite without imposing milestones or

⁹ ITU Radio Regulations, Appendix 33 (2004 ed.).

¹⁰ *See Implementation of ITU Cost Recovery Charges for Satellite Network Filings*, Public Notice, DA 01-2435 (Oct. 19, 2001).

¹¹ The FM-5 application was filed September 1, 2006, and approved by grant-stamp seven months later, on April 16, 2007. *See Sirius Satellite Radio Inc., Application to Launch and Operate Geostationary Satellite SIRIUS FM-5*, File No. SAT-LOA-20060901-00096 (stamp grant Apr. 16, 2007).

¹² *Amendment of the Commission’s Space Station Licensing Rules and Policies 2000 Biennial Regulatory Review — Streamlining and Other Revisions of Part 25 of the Commission’s Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations*, Notice of Proposed Rulemaking and First Report and Order, 17 FCC Rcd 3847, 3850 (n.4) (2002); *Amendment of the Commission’s Space Station Licensing Rules and Policies; Mitigation of Orbital Debris*, First Report and Order and Further Notice of Proposed Rulemaking in IB Docket No. 02-34, and First Report and Order in IB Docket No. 02-54, 18 FCC Rcd 10760, 10764 (n.4) (2003); *see also XM Replacement Order*, Order and Authorization, 20 FCC Rcd 1620, 1622 (¶ 7) (2005).

the requirement to post a bond, neither of which applies to satellite radio satellites.¹³

V. SIRIUS XM IS LEGALLY AND TECHNICALLY QUALIFIED TO OPERATE SIRIUS FM-6.

As demonstrated below, and in the attached Technical Description and Schedule S, Satellite CD Radio, Inc. is legally and technically qualified under Sections 25.114 and 25.144 of the Commission's rules to hold the requested modified authorization for the FM-6 satellite.

A. Section 25.114

1. Name, address, and telephone number of the applicant (§ 25.114(c)(1)):

Satellite CD Radio, Inc.
1221 Avenue of the Americas, 36th Floor
New York, NY 10020
(212) 584-5100

2. Name, address, and telephone number of the person(s), including counsel, to whom inquiries or correspondence should be directed (§ 25.114(c)(2)):

James S. Blitz
Vice President, Regulatory Counsel
Sirius XM Radio Inc.
1221 Avenue of the Americas
36th Floor
New York, NY 10020

Jennifer D. Hindin
Colleen King
Wiley Rein LLP
1776 K Street NW
Washington, DC 20006
(202) 719-7000

3. Type of authorization requested (§ 25.114(c)(3)):

Sirius XM requests authorization to allow the launch and operation of FM-6 as a geostationary satellite at the 115.2° W.L. location.

¹³ 47 C.F.R. § 25.165(a) ("For all satellite licenses issued after September 20, 2004, other than DBS licenses, DARS licenses, and replacement satellite licenses as defined in paragraph (e), the licensee is required to post a bond within 30 days of the grant of its license.").

4. Technical information (§§ 25.114(c)(4)-(13), 25.114(d)(1)-(5), 25.114(7)-(14))

The technical information required in Sections 25.114(c)(4)-(13), 25.114(d)(1)-(5), and 25.114(d)(7)-(14) is provided in Attachment A (Technical Description) and Schedule S.

5. Public interest statement (§ 25.114(d)(6))

The public interest justification for this application is provided in Section II above.

B. Section 25.144

1. Full CONUS coverage (§ 25.144(a)(3)(i))

As shown in Attachment A, the FM-6 satellite will serve the 48 contiguous states, Puerto Rico and Canada.

2. Receiver interoperability (§ 25.144(a)(3)(ii))

An interoperable radio is available to consumers.¹⁴

3. Compression rate (§ 25.144(a)(3)(iii))

Currently, Sirius XM's music channels are compressed to approximately 44 kb/s and normal voice channels to approximately 20 kb/s (the rates are approximate due to Sirius XM's use of statistical multiplexing). Special channels (e.g., traffic/weather) are compressed further to 16 kb/s and ancillary ones are either not compressed or compressed as appropriate. The compression will change over time with technology advancement. The three channels of video are each compressed to approximately 255 kb/s.

4. Milestones (§ 25.144(b))

The Commission's milestone requirements for satellite radio licensees are intended to assure that "licensees are proceeding with their proposals and spectrum is used efficiently."¹⁵ Sirius XM has already launched and fully operates a satellite radio system. Similar to the

¹⁴ See "SIRIUS XM Radio Presents MiRGE, the First Interoperable Satellite Radio," Jan. 8, 2009 (Press Release), available at <http://investor.sirius.com/releasedetail.cfm?releaseid=358155>.

recently granted authority to operate the FM-5 satellite, the Commission should not impose milestones on the FM-6 satellite.¹⁶

VI. CONCLUSION

For the foregoing reasons, Sirius XM respectfully requests that the Commission promptly grant this application.

Respectfully submitted,

/s/ James S. Blitz

James S. Blitz
Vice President, Regulatory Counsel
Sirius XM Radio Inc.
1221 Avenue of the Americas
36th Floor
New York, NY 10020

Jennifer Hindin
Colleen King
Wiley Rein LLP
1776 K Street NW
Washington, DC 20006
(202) 719-7000
Counsel for Sirius XM Radio Inc.

Dated: April 9, 2010

(Continued . . .)

¹⁵ *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754, 5799 (¶110) (1997).

¹⁶ *See Policy Branch Info.; Actions Taken*, Report No. SAT-00438, File No. SAT-LOA-20060901-00096 (Apr. 20, 2007) (grant effective Apr. 16, 2007) (Public Notice).