0019-EX-ST-2000

XM

January 7, 2000

VIA HAND DELIVERY

James R. Burtle, Acting Chief
Federal Communications Commission
Office of Engineering and Technology
Experimental Licensing Branch
2000 M Street, N.W., Rm. 281
Washington, DC, 20554

Re: Request of XM Satellite Radio Inc. for Special Temporary Authority in the Experimental Radio Service to Conduct Test Operations of S-band Digital Audio Radio Service Terrestrial Repeaters

Dear Mr. Burtle:

XM Radio Inc. ("XM Radio"), one of the two Digital Audio Radio Service ("DARS") licensees in the U.S., hereby requests six-month Special Temporary Authority ("STA") under Section 5.61 of the Commission's rules to conduct tests of terrestrial repeater transmitters at four fixed locations around the Fort Lauderdale, Florida area in its licensed frequency band (2332.5-2345 MHz). XM Radio requests authority to initiate this testing by February 1, 2000.

XM Radio is currently using portable terrestrial repeater transmitter facilities to conduct tests in metropolitan areas throughout the United States pursuant to its national experimental authorization, granted by the Experimental Licensing Branch on August 17, 1999. See FCC File No. 0199-EX-PL-1999 (Call Sign WB2XCA). These ongoing tests are a critical part of the technical planning required for a successful launch of XM Radio's DARS service. Consistent with the Commission's March 1997 Further Notice of Proposed Rulemaking, XM Radio expects to deploy "gap-filler" terrestrial repeaters as part of its DARS network in most major cities. *See* Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, 12 FCC Rcd 5754 (1997).

The purpose of XM Radio's experimental operations in the Fort Lauderdale area is to assess the likely effect of the operation of the terrestrial repeater facilities of Sirius Radio, Inc., the other satellite DARS licensee (transmitting at 2320-2332.5 MHz), on the reception of XM Radio's DARS service and the operation of XM Radio's own terrestrial repeaters. In this way, such experimental operations will help to facilitate the efficient design and deployment of XM Radio's prospective DARS repeater network.

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Under XM Radio's proposal, it will operate two types of repeaters. At one fixed location in the Fort Lauderdale area, it will operate a transmitter with an EIRP of approximately 50 kW; this transmission is intended to simulate the operation of one of Sirius Radio's planned terrestrial repeaters. This transmitter will operate, however, in XM Radio's own licensed frequency band, 2332.5-2345 MHz. At the other three fixed locations, XM Radio will operate transmitters with a maximum EIRP of 1.2 kW. These transmitters will simulate the operation of XM Radio's planned standard repeaters in its final network. The technical parameters of both the higher and lower power transmitters proposed herein deviate sufficiently from the repeater operations authorized under XM Radio's current experimental license to require a new experimental STA for these Fort Lauderdale operations.

The attached exhibits, listed below, provide the operational and technical details of XM Radio's proposed experimental operations at the four fixed locations around Fort Lauderdale:

Exhibit A: Experiment Objectives and Operations

Exhibit B: Transmitter Locations

Exhibit C: Transmitter Technical Parameters

Exhibit D: Radio-frequency Exposure Compliance

Exhibit E: Emission Isolation to Existing Systems

In particular, Exhibit C provides detailed information concerning the technical parameters of the proposed transmitters. This information includes frequency, EIRP, and modulation of the proposed signals. Product sheets and measured performance of components are also included.

XM Radio is authorized to operate its DARS system in the U.S. in the 2332.3-2345 MHz frequency band on an exclusive basis, and it believes that it can conduct the proposed testing without causing interference to any existing radio operators. XM Radio has detected no interference problems during the tests conducted pursuant to its national experimental authorization. Moreover, XM Radio will work with any existing radio operators to assure protection of those systems.

As indicated above, XM Radio hopes to initiate testing on February 1, 2000. If testing goes beyond the six-month term of the proposed STA is necessary, XM Radio will file an STA extension request and an application for a two-year experimental license by the applicable deadlines. *See* 47 C.F.R. 5.61(b).

The required filing fee of $45.00 and FCC Form 159 are enclosed with this request. 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. §853(a).

Please direct any questions regarding this matter to the undersigned.

Very truly yours,

Lon C. Levin
Senior Vice President, Regulatory

cc: Carl Huie