0110-EX-ST-1999

XM

March 25, 1999

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 Test S-band Digital Audio Radio Service Terrestrial Repeater Network

Dear Mr. Burtle:

XM Satellite 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 a multi-transmitter network in the greater Washington, D.C. area in its licensed frequency band (2332.5-2345 MHz). XM Radio requests authority to initiate this testing by April 1, 1999. The required filing fee of $45.00 and FCC Form 159 are enclosed with this request.

XM Radio's proposed testing of this multi-transmitter network is a critical part of the technical planning required for a successful launch of its 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 proposed testing is needed to validate the RF planning methodology of its terrestrial repeater facilities, thereby facilitating the efficient design and deployment of its prospective DARS repeater networks.

In July 1998, a similar experimental STA was granted to Stanford Telecom, a former contractor of XM Radio, to conduct tests at three sites in the Washington, D.C. area. *See* FCC File No. S3431EX98. With the conclusion of this contractual relationship, XM Radio now needs a similar STA to conduct (i) further tests at these fixed sites, and (ii) additional testing with up to thirty portable terrestrial repeater transmitters at yet-to-be determined sites throughout the Washington, D.C. metropolitan area. XM Radio selected the Washington, D.C. region for this testing because of the

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proximity of its company headquarters, and because this area includes a mix of urban and suburban environments that offers a representative sample of propagation conditions across the United States.

The attached exhibits, listed below, provide the operational and technical details of XM Radio's proposed experimental operation of these terrestrial repeater transmitters:

Exhibit A: Experiment Objectives and Operations

Exhibit B: Transmitter Locations for Fixed-Site Testing

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. During the testing conducted in 1998 by Stanford Telecom, no interference problems were detected. 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 April 1, 1999. If testing 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).

Please direct any questions regarding this matter to the undersigned.

Very truly yours,

Lon C. Levin
Senior Vice President, Regulatory

cc: Carl Huie