

May 20, 2011

VIA EDGAR

Mr. Larry Spigel
Assistant Director
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Mailstop 3720
Washington, D.C. 20549

**RE: Sirius XM Radio Inc.
Form 10-K for the year ended December 31, 2010
Filed February 16, 2011**

**Form 10-Q for the quarterly period ended March 31, 2011
Filed May 3, 2011
File No. 001-34295**

Dear Mr. Spigel:

We are writing to respond to the comments set forth in your comment letter, dated May 9, 2011, relating to the Annual Report on Form 10-K (the "Form 10-K") of Sirius XM Radio Inc. ("we", "our", or the "Company") for the year ended December 31, 2010 and the Company's Form 10-Q for the quarterly period ended March 31, 2011. To assist your review, we have retyped the text of the Staff's comments in italics below.

Form 10-K for the Fiscal Year Ended December 31, 2010

Management's Discussion and Analysis..., page 34

Free Cash Flow, page 37

1. *We note that your Chief Executive Officer stated on an earnings call on February 15, 2011 that free cash flow is "the most important measure of a business's success." Please expand to discuss the following:*
 - *the manner in which you use free cash flow to conduct or evaluate your business;*
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- *the economic substance behind your decision to use it;*
- *the material limitations associated with the use of the free cash flow as compared to the use of the most directly comparable GAAP measure, net cash provided by operating activities; and*
- *the manner in which you compensate for these limitations when using free cash flow.*

Please provide us with the proposed discussion that you will include in future filings to provide the details above.

Response:

We have consistently disclosed free cash flow as a key financial measure. Our management and Board of Directors have used free cash flow to evaluate the cash generated by our current subscriber base, net of capital expenditures and other investment activity, for the purpose of allocating resources to activities such as subscriber acquisition and additional capital expenditures, to evaluate our ability to generate sufficient cash flow to fund our scheduled debt maturities, to evaluate discretionary refinancing and retirements of debt, stock repurchases, dividends and to determine performance-based compensation for employees. We understand that free cash flow is not a substitute for comparable measures calculated in accordance with generally accepted accounting principles in the United States of America (GAAP) such as net cash provided by operating activities and therefore have disclosed this fact in Management's Discussion and Analysis (MD&A), Adjusted Results of Operations on page 35 of the Form 10-K and also have provided a reconciliation of Net Cash Provided by Operating Activities to Free Cash Flow on page 48 of the Form 10-K.

In our future filings, we will include the following incremental disclosures under Free Cash Flow in the Adjusted Results of Operations section in the MD&A in our quarterly reports on Form 10-Q and annual reports on Form 10-K to be filed with the Commission:

Free cash flow, which is a financial measure that is not calculated and presented in accordance with generally accepted accounting principles in the United States of America ("Non-GAAP"), can be calculated by deducting amounts under the captions "Additions to property and equipment" and deducting or adding "Restricted and other investment activity" from "Net cash provided by (used in) operating activities" from the Consolidated Statements of Cash Flows. Free Cash flow should be used in conjunction with other GAAP financial performance measures and may not be comparable to Free Cash Flow measures presented by other companies. Free Cash Flow should be viewed as a supplemental measure rather than an alternative measure of cash flows from operating activities, as determined in accordance with GAAP. Our management and our Board of Directors use free cash flow to evaluate the cash generated by our current subscriber base, net of capital expenditures and other investment activity, for the purpose of allocating resources to activities such as subscriber acquisition and additional capital expenditures, to evaluate our ability to generate sufficient cash flow to fund our scheduled debt maturities, to evaluate discretionary refinancing and retirements of debt, stock repurchases, dividends and to determine performance-based compensation for employees. Free cash flow is limited and does not represent remaining cash flows available for discretionary expenditures due to the fact that the measure does not deduct the payments required for debt maturities. We believe free cash flow provides useful supplemental information to investors regarding our current and projected cash flow, along with other GAAP measures (such as cash flows from operating and investing activities), to determine our financial condition and to compare our operating performance to other communications, entertainment and media companies.

Form 10-Q for the Quarterly Period Ended March 31, 2011

Management's Discussion and Analysis..., page 24

Subscriber Data, page 30

2. *We note that you have deleted the subscriber information based on retail, OEM and rental in your most recent Form 10-Q. We also note that your satellite radios are primarily distributed through OEMs, retail locations and your website. Further, you discuss the impact of OEM and retail businesses on your results of operations in the MD&A and/or in your earnings calls. Please tell us why such information was deleted and your conclusion as to why such information is not considered meaningful to your investors to understand your business and results of operations.*

Response:

Our subscriber data chart included in the MD&A section of our Form 10-Q includes certain key metrics. These operational metrics relate to the evolution of the subscriber and detail the trends in our overall subscriber base, average self-pay churn, and our conversion rate. This chart is followed by disclosure regarding the changes in these metrics. In our preparation and review of the Form 10-Q, we concluded that the supplemental data for Retail, OEM, and Rental for the end of period subscribers and net additions did not provide useful information to investors as there is little difference in the products and services being provided, or the prices being charged. We also note that management does not use the channel breakdowns in making operating decisions.

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As requested by the Staff, we acknowledge that, with respect to filings made by us:

- We are responsible for the adequacy and accuracy of the disclosure in our filings;
 - Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and
 - We may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.
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Any questions concerning the responses to the Staff's comment letter may be directed to me by telephone at (212)-584-5170 or by fax at (212)-584-5252.

Sincerely,

/s/ David J. Frear

David J. Frear

Executive Vice President and Chief Financial Officer

cc: Securities and Exchange Commission
Dean Suehiro, Staff Accountant