



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

April 27, 2015

Via E-mail

Thomas B. Perkins
President and Chief Executive Officer
Core-Mark Holding Company, Inc.
395 Oyster Point Boulevard, Suite 415
South San Francisco, CA 94080

**Re: Core-Mark Holding Company, Inc.
Form 10-K for Fiscal Year Ended December 31, 2014
Filed March 2, 2015
File No. 0-51515**

Dear Mr. Perkins:

We have reviewed your filing and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to our comment, we may have additional comments.

Form 10-K for Fiscal Year Ended December 31, 2014

Notes to Consolidated Financial Statements

2. Summary of Significant Accounting Policies
Inventories, page 51

1. With a view toward providing enhanced disclosure in future filings, please help us understand how inventory costs on a LIFO basis using producer price indices, or estimated producer price indices, are determined. Please also help us understand and show us an illustration of how inventory holding gains, such as the cigarette and candy inventory holdings gains disclosed in Note 17 and discussed in Management's Discussion and Analysis of Financial Condition and Results of Operations, are calculated. Finally, help us understand how these inventory holding gains relate to or interact with: LIFO reserves and changes in LIFO reserves; and income realized as a result of a LIFO

inventory liquidation. In this regard, we assume the decrement in inventory layers disclosed in note 5 to the financial statements represents the amount of income realized as a result of a LIFO inventory liquidation, but if this is not the case, please clarify.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comment, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- 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
- the company 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.

You may contact Robyn Manuel, Staff Accountant, at (202) 551-3823 or Donna Di Silvio, Staff Accountant, at (202) 551-3202 if you have questions regarding comments on the financial statements and related matters. You may contact me at (202) 551-3344 with any other questions.

Sincerely,

/s/ William H. Thompson

William H. Thompson
Accounting Branch Chief