

Mail Stop 3561

September 9, 2008

By Facsimile and U.S. Mail

Mr. J. Michael Walsh
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 the Fiscal Year Ended December 31, 2007
Forms 10-Q for the Fiscal Quarters Ended
March 31, 2008 and June 30, 2008
File No. 0-51515**

Dear Mr. Walsh:

We have reviewed your supplemental response letter dated June 12, 2008 as well as your filing and have the following comments. As noted in our comment letter dated May 19, 2008, we have limited our review to your financial statements and related disclosures and do not intend to expand our review to other portions of your documents.

Form 10-K for the Fiscal Year Ended December 31, 2007

Item 1. Business

Customers, Products and Suppliers, page 3

1. We note your response to comment 2 of our letter dated May 19, 2008 regarding the disclosure of product and service revenue information. The disclosure requirements do not necessarily presume revenue generated by a single product would exceed the 10% quantitative threshold and therefore expects the grouping of "similar products and services" when providing product revenue contributions. Disclosing a further breakdown of the revenue contribution of the food/non-food category would provide investors with better information about your sales mix which is the primary objective of the disclosure requirement. Accordingly, we are not persuaded that your enterprise-wide disclosure using the category of food/non-food is consistent with the disclosures required by

Mr. J. Michael Walsh
Core-Mark Holding Company, Inc.
September 9, 2008
Page 2

paragraph 37 of SFAS 131 and Item 101(c)(1)(i) of Regulation S-K. Please revise your disclosure and show us what your revisions will look like.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Estimates, page 36

2. We note your revised disclosure and response to comment 5 of our letter dated May 19, 2008 regarding your critical accounting estimates. With respect to your disclosure relating to the estimate of claim liabilities and insurance recoveries, please also quantify through a sensitivity analysis the variability to change in order to demonstrate how significant deviations from historical experience could have a material impact on your estimates of accruals. Please refer to SEC Release No. 33-8350. Please show us what your revised disclosure will look like.

General

Please send us your response to our comments within ten business days from the date of this letter. You should provide a cover letter keying your response to our comments, and provide the requested supplementary information, if any. Where our comment requests you to revise future filings, we would expect that information to be included in your next filing. If you believe complying with a comment is not appropriate, please tell us why in your letter. Your response should be submitted in electronic form on EDGAR as a correspondence file. Refer to Rule 101 (a) of Regulation S-T.

You may contact Milwood Hobbs, Staff Accountant, at (202) 551-3241 or Michael Moran, Review Accountant at (202) 551-0650, if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Andrew Mew
Accounting Branch Chief