



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-0405

January 27, 2006

Mr. John D. Grampa
Vice President Finance and Chief Financial Officer
Brush Engineered Materials Inc.
17876 St. Clair Avenue
Cleveland, OH 44110

Re: Brush Engineered Materials Inc.
Form 10-K for Fiscal Year Ended December 31, 2004
Filed March 14, 2005
Response Letter Dated January 9, 2006
File No. 1-15885

Dear Mr. Grampa:

We have reviewed your response and have the following comments. We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2004

Financial Statements

Note B – Inventories, page 36

1. We note your response to our prior comment number two. It appears from your response that you have established LIFO pools by legal entity. Please tell us why you believe this is appropriate. Please refer to Section 4 of the AICPA's Issues Paper entitled, *Identification and Discussion of Certain Financial Accounting and Reporting Issues Concerning LIFO Inventories*. In addition, we refer you to FRC 205 and SAB Topic 5:L for additional guidance.

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2. We note from your response that since adoption of LIFO, new pools were created due to acquisition or formation of a new subsidiary.
 - For those pools that were created by virtue of an acquisition, please tell us how the inventory items acquired were clearly dissimilar from those of your pre-existing inventories to warrant the creation of a separate LIFO pool. Please refer to FRC 205.02a.i.
 - To the extent new subsidiaries were created for reasons other than acquisitions, please describe the fact patterns that existed to cause the formation of any new subsidiaries and why these events warranted the creation of new and separate LIFO pools.

Note N – Related Party Transactions, page 50

3. It is unclear why you continue to believe footnote disclosure of your officer loan arrangements is sufficient. Please note that SAB Topic 4:E specifically states that such amounts should be separately stated in the balance sheet. Please modify your disclosure accordingly.

Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Kevin Stertz at (202) 551-3723 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3683 with any other questions.

Sincerely,

Jill S. Davis
Branch Chief