



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-7010

January 23, 2008

*By U.S. mail and facsimile to (847) 439-0737*

Mr. James M. Froisland  
Senior Vice President, Chief Financial Officer, Chief Information Officer and  
Corporate Secretary  
Material Sciences Corporation  
2200 East Pratt Boulevard  
Elk Grove Village, IL 60007

**RE: Material Sciences Corporation  
Form 10-K for the fiscal year ended February 28, 2007  
Filed May 11, 2007**

**File No. 1-8803**

Dear Mr. Froisland:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your disclosures in future filings 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the year ended February 28, 2007

Item 7A. Quantitative and Qualitative Disclosures About Market Risk, page 29

1. Given the risk factor on page 10, it appears that the Company may be materially impacted by commodity price risk. In future filings, please discuss this risk and the strategies used, if any, for managing this risk. See Item 305(b) of Regulation S-K.

Note 14: Business Segments, page 52

2. It is not clear that the Company has only one reportable segment under SFAS 131. In this regard, we note that the customer base varies both by industry and by geography. We also note the variety of products and the difference in gross margins. In order to fully analyze this issue, please provide us with copies of all financial reports made available to the CODM(s) during the last two fiscal years and interim period – see paragraph 10 of SFAS 131. Multiple versions of the same report may be excluded. You may request that the reports be returned upon completion of our review. See Section 240.12b-4 of the Exchange Act Rules. Also, please clarify for us how the CODM was identified in assessing compliance with SFAS 131. Further, please clarify for us whether the CODM receives any of the disaggregated financial information that is compiled in connection with financial reports generated by/for the multiple subsidiaries listed in Exhibit 21.

Schedule II, page 61

3. In future filings, please separately disclose activity in the inventory reserve (page 26). See Article 12-09 of Regulation S-X.

\* \* \* \*

Please respond to these comments by providing the supplemental information requested within ten business days or tell us when you will provide us with a response. Please provide us with a supplemental response that addresses each of our comments. Please file your supplemental response on EDGAR as a correspondence file. We may raise additional comments after we review your responses.

To expedite our review, you may wish to provide complete packages to each of the persons named below. Each package should include a copy of your response letter and any supplemental information.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they provided all information investors 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.

Mr. James M. Froisland  
Material Sciences Corporation  
January 23, 2008  
Page 3

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

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

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Jenn Do at (202) 551-3743, Al Pavot at (202) 551-3738 or me at (202) 551-3355 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Terence O'Brien  
Branch Chief