



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4631

February 2, 2011

**via U.S. mail and facsimile**

Clifford D. Nastas, Chief Executive Officer  
Material Sciences Corporation  
2200 East Pratt Boulevard  
Elk Grove Village, Illinois 60007

**RE: Material Sciences Corporation  
Form 10-K for the Fiscal Year Ended February 28, 2010  
Filed May 14, 2010  
File No. 1-08803**

Dear Mr. Nastas:

We have reviewed your filing and have the following comments. In some of our comments, 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 comments apply 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 these comments, we may have additional comments.

**Form 10-K for the Fiscal Year Ended February 28, 2010**

**Management's Discussion and Analysis, page 18**

1. While the discussion of results of operations in your Forms 10-K and 10-Q discusses intermediate effects of certain trends and events on your operations, the analysis generally does not discuss the reasons underlying those intermediate effects in sufficient detail for a reader to see the business through the eyes of management. For example, we noted the following in the analysis beginning on page 20 of the Form 10-K:

- You attribute the substantial decreases in net sales to softness in the auto industry and other markets. Please provide additional analysis including discussion of the components of the decrease and the underlying reasons. For example, quantified disclosure and analysis of the number of units sold of various products, as well as quantified discussion of prices may provide greater insight into the underlying reasons for the changes.
- In the discussion of gross profit, provide more detail in how the sales mix shifted, how it impacted gross profit and the underlying reasons. Quantify the volume decreases.
- This is the first mention of scrap sales in the filing. Please provide a discussion of scrap sales, explain the relationship to revenue and cost of goods sold, the reason for decline, and how the decline has impacted gross profit.
- Explain the underlying reasons for reductions in overhead and how it impacts gross profit.
- This is the only mention of “non-conformance” in the filing. Please provide a discussion and explain how it impacted gross profit.
- Explain the nature of manufacturing performance improvements.
- Discuss the underlying cause of derivative income during the periods and the reasons for the increase in fiscal year 2010.

These examples are not meant to be a comprehensive list and are merely representative of issues noted throughout your discussion. In future filings, please expand the discussion of results of operations to quantify the impact of the events disclosed and to describe their underlying causes. For additional guidance, please refer to SEC Release 33-8350, available on the SEC website at [www.sec.gov/rules/interp/33-8350.htm](http://www.sec.gov/rules/interp/33-8350.htm).

Management’s Report on Internal Control over Financial Reporting, page 56

2. We note that management has qualified its conclusion as to the effectiveness of your internal control over financial reporting in terms of management’s belief. Specifically, your disclosure provides that “management believes that, as of February 28, 2010, the Company’s internal control over financial reporting was effective.” Please confirm for us, if true, that management concluded that your internal control over financial reporting was effective as of February 28, 2010 and, in future filings, please refrain from qualifying management’s conclusion.

Exhibits and Financial Statement Schedules, page 59

3. We note that you do not appear to have filed the schedules to your credit agreement with JP Morgan Chase dated May 12, 2008 (Exhibit 4(d) to your annual report). Please file the entire agreement, including all of its schedules and exhibits, with your next periodic report or a current report.

Exhibits 31.1 and 31.2

4. We note that in paragraph 4 you have deleted the “(s)” following “certifying officer(s).” In future filings, please file your certifications exactly as set forth in Item 601(b)(31)(i) of Regulation S-K.

Quarterly Report on Form 10-Q for the Quarterly Period Ended August 31, 2010

Management’s Discussion and Analysis . . . , page 17

5. We note that you have sold assets on a number of occasions during the past several years. We further note that you have increased your cash and cash equivalents balance as a result of these sales. At August 31, 2010, your balance of cash and cash equivalents was approximately \$34.8 million. By comparison, at February 28, 2010, the same balance was approximately \$12.9 million and at February 28, 2009, it was approximately \$10.7 million. This pattern suggests a trend. In future filings, please provide a materially complete discussion and analysis of this and any other known trends that could impact your liquidity, capital resources and results of operations. For example, you may wish to address management’s plans for the cash it has accumulated. Please refer to Item 303 of Regulation S-K.

Liquidity and Capital Resources, page 21

6. In future filings, please provide a description of the material terms and conditions of your credit facility, including, but not limited to, any provisions that could restrict your freedom of action, such as negative covenants restricting your ability to incur debt or sell assets or securities. In addition, to the extent material, please address the status of your compliance with financial and other covenants in your credit facility. In doing so, you may wish to provide both quantitative and qualitative disclosure.

Controls and Procedures, page 23

7. We note that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures were effective as of the end of the period covered by your quarterly report. However, you state that your “disclosure controls and internal control over financial reporting can only provide reasonable assurance of achieving their control objectives.” In future filings, please revise your disclosure to clarify, if true, that your officers concluded that your disclosure controls and procedures were effective at the reasonable assurance level.

Exhibits 31.1 and 31.2

8. We note that in paragraph 4 you have deleted the “(s)” following “certifying officer(s)” and have deleted the parenthetical “(the registrant’s fourth fiscal quarter in the case of an annual report).” In future filings, please file your certifications exactly as set forth in Item 601(b)(31)(i) of Regulation S-K.

Definitive Proxy Statement Filed on May 28, 2010

Election of Directors, page 7

9. In future filings, please disclose the information required by Item 401(e) of Regulation S-K about the specific experience, qualifications, attributes and skills that led to the board’s conclusion that each nominee, including incumbent directors, should serve or continue to serve on the board. Please provide us supplementally with draft disclosure showing how you will present this information in future filings.

Director Compensation for Fiscal Year 2010, page 14

10. We note that you have reported the value of the phantom stock awards by reporting the amount of the award recognized during fiscal year 2010 for financial reporting purposes. In future filings, please report the aggregate grant date fair value of the awards computed in accordance with FASB ASC Topic 718. Based on the results for the most recently completed fiscal year, please provide us supplementally with draft disclosure showing how you will present this information in future filings. See Item 402(r) of Regulation S-K.

Do we have Corporate Governance Guidelines?, page 15

11. In future filings, please disclose the specific requirements of your stock ownership program for your directors and officers as well as the status of their compliance with the requirements.

Executive Compensation Tables, page 20

12. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.

Summary Compensation Table for the Year Ended February 28, 2010, page 20

13. We note that you have reported the value of the option awards by reporting the amount of the award recognized during fiscal year 2010 for financial reporting

purposes. In future filings, please report the aggregate grant date fair value of the awards computed in accordance with FASB ASC Topic 718. Based on the results for the most recently completed fiscal year, please provide us supplementally with draft disclosure showing how you will present this information in future filings. See Item 402(n) of Regulation S-K.

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 comments, 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 Tracey McKoy, Staff Accountant, at (202) 551-3772 or, in her absence, the undersigned Accounting Branch Chief at (202) 551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Errol Sanderson, Financial Analyst, at (202) 551-3746 or, in his absence, Dieter King, Staff Attorney, at (202) 551-3338 with any legal related questions.

Sincerely,

Terence O'Brien  
Accounting Branch Chief