



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

July 15, 2010

Mr. Steven W. Peterson
Chief Financial Officer
Mesa Laboratories, Inc.
12100 West Sixth Avenue
Lakewood, Colorado 80228

RE: **Mesa Laboratories, Inc.**
Form 10-K for the fiscal year ended March 31, 2010
Filed June 29, 2010
File No. 000-11740
Form 8-K/A dated April 27, 2010
Filed July 13, 2010

Dear Mr. Peterson:

We have reviewed your response letter dated June 17, 2010 and filings 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.

Form 10-K for the Fiscal Year End March 31, 2010

Note 11. Segment Data, page 41

1. We note from your response to our prior comment 1 that you operate as a single entity, manufacturing and selling instruments and disposables utilized for quality control in various industries, which you group by product family or brand name). You also indicate that as a matter of practice, you manage the company as a single entity and do not produce any financial statements by product or product line and do not manage the company as any more than a single segment. However, we note that you continue to disclose on page 41 that the company "aggregates its segments as one reportable segment based on the similar characteristics of their operations." As a result, your responses conflict with your current disclosure since

your responses appear to indicate that you have one operating segment which is also your one reportable segment.

- Please confirm to us that the five product lines you disclose in this note as of March 31, 2010, do not meet the definition of operating segments as defined in FASB ASC 280-10-50-1.
- Specifically tell us which of the three criteria outlined in that guidance has not been met.
- Describe to us your management structure, including the office and titles of the party or parties responsible for each of the product lines and explain why the officeholder would not be considered the chief operating decision maker for these product lines.
- Describe to us the financial information reviewed by the chief operating decision maker for each product line.
- Further, as we note in your response that you have been approached many times in your history to sell one of these product lines individually but you have concluded not to do so for the reasons you noted, describe to us the financial information you have used to make that determination – i.e., the measures you have used to determine profitability of the different product lines. Explain why that information would not be considered discrete financial information.
- Please provide us with proposed revised disclosure to be included in future filings beginning with your next 10-Q that will eliminate any investor confusion caused by the disclosure currently included on page 41, or advise us.

Amendment no. 1 to Form 10-Q for period ended June 30, 2009
Exhibit 31

2. We note you have not responded to our prior comment 2 from our letter dated June 7, 2010 and reissue that comment. We note also that you have deleted the language “most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report)” from paragraph 4(d) of the certifications required by Exchange Act 13a-14(a) for your Form 10-K for fiscal year ended March 31, 2010. Please confirm, that in future filings, you will include this language.

Form 8-K/A dated April 27, 2010 and filed July 13, 2010

Exhibit 99.3 Unaudited Pro Forma Combined Balance Sheet

Unaudited Pro Forma Combined Balance Sheet

3. Reference is made to the pro forma adjustment in cash and cash equivalents of \$(794,000) denoted as footnote (2). In this regard, please tell us the nature of this entry and tell us where in your pro forma balance sheet the offset, to this pro

- forma adjustment, was recorded. Also, please provide us with your basis for recording this entry as currently presented in your pro forma balance sheet.
4. Reference is made to the pro forma adjustment in property, plant, and equipment of \$(60,000) denoted as footnote (2). In this regard, please tell us the nature of this entry and tell us where in your pro forma balance sheet the offset, to this pro forma adjustment, was recorded. Also, please provide us with your basis for recording this entry as currently presented in your pro forma balance sheet.
 5. Reference is made to the pro forma adjustment in current portion of long-term debt of \$(278,000) denoted as footnote (2). In this regard, please tell us the nature of this entry and tell us where in your pro forma balance sheet the offset, to this pro forma adjustment, was recorded. Also, please provide us with your basis for recording this entry as currently presented in your pro forma balance sheet.
 6. Reference is made to the pro forma adjustment in long-term debt of \$(1,067,000) denoted as footnote (2). In this regard, please tell us the nature of this entry and tell us where in your pro forma balance sheet the offset, to this pro forma adjustment, was recorded. Also, please provide us with your basis for recording this entry as currently presented in your pro forma balance sheet.
 7. Reference is made to the pro forma adjustments in current portion of long-term debt and long-term debt of \$940,000 and \$3,521,000, respectively, denoted as footnote (4). Please reconcile for us the sum of the aforementioned amounts to the \$4,521,000 amount you disclose as debt incurred in footnote (4).

Notes to Unaudited Pro Forma Combined Financial Statements

8. Reference is made to footnote (1).
 - Please confirm to us, if true, in addition to purchasing the SGM Biotech, Inc. business for \$12 million you separately purchased the building housing SGM Biotech, Inc. for an additional \$2,150,000.
 - Please reconcile for us your purchase price allocation to the total consideration paid by you for the acquisition of all of the outstanding shares of common stock of SGM Biotech, Inc.
 - We note you indicate that other intangible assets acquired during the acquisition created a deferred tax liability and increased goodwill by \$2,310,000. Please provide us with the method and assumptions used in estimating the deferred tax liability and the accounting literature on which you relied upon.

9. Reference is made to footnote (1). Please reconcile for us the sum of the amounts you present as property, plant and equipment in the columns labeled "SGM Biotech Inc." and Pro Forma Adjustments" in your pro forma balance sheet of \$1,746,000 and \$1,593,000, respectively, to the amounts disclosed as acquisition purchase price allocated to property, plant and equipment of \$2,073,000, and price paid for the building housing SGM Biotech, Inc. of \$2,150,000, which is presented in footnote (1).
10. Reference is made to footnote (3). Please provide us with the method and assumptions (i.e. base, amortization period, etc.) used in estimating the depreciation/amortization related to PP&E and intangible assets. Also tell us your basis for establishing the amortization period used in your calculation.
11. Reference is made to footnote (5). Please provide us with the method and assumptions (i.e. principle, interest rate, the period, etc.) used in estimating the pro forma interest expense on the debt incurred to acquire SGM Biotech, Inc of \$(147,000). Also, tell us your basis in establishing the interest rate used in your calculation.
12. Reference is made to footnote (5). Please tell us why you present in the pro forma balance sheet a pro forma adjustment \$147,000 for accrued interest. Adjustments related to the pro forma combined balance sheet shall be computed assuming the transaction was consummated at the end of the most recent period for which a balance sheet is required. Refer to Article 11-02(b)(6) of Regulation S-X in your response.
13. Reference is made to footnote (8). Please provide us with your calculation that supports the \$(146,000) amount recorded as a pro forma adjustment to income tax expense.

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.

Stephen W. Peterson
Mesa Laboratories, Inc.
July 15, 2010
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Please contact Dennis Hult at (202) 551-3618 or me at (202) 551-3212 if you have any questions regarding comments on the financial statements. Please contact Allicia Lam at (202) 551-3316 or Jay Mumford at (202) 551-3637 if you have questions on any other comments.

Sincerely,

Jeffrey Jaramillo
Accounting Branch Chief