



DIVISION OF
CORPORATION FINANCE

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

September 20, 2011

Via Email

Mr. Alnoor Shivji
Chief Executive Officer
WaferGen Bio-systems, Inc.
7400 Paseo Padre Parkway
Fremont, CA 94555

Re: WaferGen Bio-systems, Inc.
Form 10-K for the Year Ended December 31, 2010
Filed March 31, 2011
Form 10-Q for the Quarter Ended June 30, 2011
Filed September 12, 2011
File No. 000-53252

Dear Mr. Shivji:

We have reviewed your response dated September 8, 2011 and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2010

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 24

-Critical Accounting Policies and Estimates, page 31

1. We note from your June 30, 2011 Form 10-Q that you reported revenue of \$44,905 and \$395,937 for the three and six months ended June 30, 2011, which represents a significant decline from the prior year. We further note that you report inventory of \$1.1 million and \$1 million as of June 30, 2011 and December 31, 2010, respectively. Please explain to us in more detail how you determined that the market value of your inventory exceeds the book value as of June 30, 2011.

Item 8. Financial Statements and Supplementary Data, page 33

Note 2. Summary of Significant Accounting Policies, page 49

-Stock-Based Compensation, page 51

2. We note your response to prior comment 4. Considering the "comparable" companies that you have utilized in the determination of your expected volatility for the valuation of your stock options are considerably larger than you, please explain to us in more detail how the companies that you identified in your response are in the same stage of life cycle, size and financial leverage as you and how you complied with the guidance in 718-10-55-36 and 37 of the FASB Accounting Standards Codification and Question 6 in SAB Topic 14.D.1. Within your response, please explain to us the process you undertook to identify companies that meet the criteria set forth above.
3. We note that you have utilized different methodologies for estimating expected volatility for your stock options and your warrant liabilities. Please explain to us your consideration of using a methodology similar to that utilized for your warrants in connection with the valuation of the stock options. Explain why you have concluded that different methodologies are appropriate.

-Warrant Derivative Valuation, page 51

4. We note your response to prior comment 5. As previously requested, please explain to us how you have determined the amount of the private placement discount within this model. Also, please clarify to us why you believe it is now appropriate to remove the disclosure in future filings related to this discount. In this regard, we note your statement that you intend to remove the disclosure because it is "not normal practice." Clarify what you mean by this statement.

5. We note your response to prior comments 6, 7, and 9. Please specifically provide to us the reference in the FASB accounting and SEC guidance related to stock options that “requires no less than 50% historic volatility be considered (in the determination of your expected volatility) assuming [your] stock has been traded for not less than the expected term.”

Note 6. Redeemable Convertible Preference Shares in Subsidiary, page 55

6. We note your response to prior comment 8. Please explain to us in more detail why you are recording the embedded conversion option that you have determined should be bifurcated from the Series B RCPS, the host instrument, at fair value with changes in the fair value recorded as a gain or loss upon the resolution of the contingency rather than upon the inception of the derivative. Within your discussion, please explain to us in more detail why it appears you are applying the beneficial conversion feature guidance in 470-20-35-1 of the FASB Accounting Standards Codification since you have determined this to be an embedded derivative rather than a beneficial conversion feature. Cite the accounting literature relied upon and how you applied it to your situation. We may have more comments upon reviewing your response.
7. Further to the above, please explain to us why you believe the investors’ right to convert its Series C Convertible Preferable Shares into shares of the subsidiary is a derivative that has negligible value.
8. We note your response to prior comment 9. Please revise your future filings to disclose how you determined the significant assumptions utilized within the Black-Scholes valuation model related to the embedded derivatives associated with the redeemable convertible preference shares for each reporting period presented.

Form 10-Q for the Quarter Ended June 30, 2011

Note 8. Warrant Derivative Liabilities, page 12

9. We note that you utilize the Black-Scholes valuation model to value the warrants that were issued in connection with the May 2011 offering. Please revise your future filings to explain you determined the significant assumptions utilized within the model.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 20

-Results of Operations, page 22

10. We note your disclosure on page 22 related to your discussion for the underlying reasons why you experienced a significant decrease in your revenue for the three and six months ended June 30, 2011 as compared to the three and six months ended June 30, 2010.

Mr. Alnoor Shivji
WaferGen Bio-systems, Inc.
September 20, 2011
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Please revise your future filings to explain in more detail why you are experiencing an absence or a decrease of the sales of your SmartChip Real-Time PCR Systems, your Real-Time PCR Chip panels and Fee-for-Services. Provide us with a sample of your proposed disclosure.

-Critical Accounting Estimates, page 27

-Derivative Liability for Conversion Element of Convertible Promissory Notes, page 29

11. We note that you utilize the Monte Carlo Simulation approach to value the derivative liability at inception and at each reporting date. Please revise your future filings to explain how you determined the significant assumptions utilized within the model.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

/s/ Kevin L. Vaughn

Kevin L. Vaughn
Accounting Branch Chief