



DIVISION OF
CORPORATION FINANCE

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

December 31, 2013

Via E-mail

Mr. John R. Peeler
Chief Executive Officer
Veeco Instruments, Inc.
Terminal Drive
Plainview, New York 11803

**Re: Veeco Instruments, Inc.
Form 10-K for the Year Ended December 31, 2012
Filed November 4, 2013
Form 10-Q for the Quarter Ended September 30, 2013
Filed November 8, 2013
File No. 000-16244**

Dear Mr. Peeler:

We have reviewed your filings and have the following comments. In 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 Fiscal Year Ended December 31, 2012

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 34

Liquidity and Capital Resources, page 45

1. We note your disclosures on page F-43 that you have \$96.4 million of undistributed earnings as of December 31, 2012 related to your foreign subsidiaries and that you intend to permanently reinvest these earnings within your foreign subsidiaries in China, South Korea, Japan, Malaysia, Singapore and Taiwan. We also note on page F-7 that you have \$385 million of cash and cash equivalents outstanding as of December 31, 2012. To the extent cash related to undistributed earnings could be considered material to an understanding of your liquidity and capital resources in future periods, please revise your future filings to disclose the cash and investment amounts held by your foreign

subsidiaries that would not be available for use without you incurring income taxes thereon. Please further provide a discussion of any known trends, demands or uncertainties as a result of this policy that are reasonably likely to have a material effect on the business as a whole or that may be relevant to your financial flexibility. Refer to Item 303(a)(1) of Regulation S-K.

Index to Consolidated Financial Statements and Financial Statement Schedule, page F-1

Notes to Consolidated Financial Statements, page F-13

Note 10. Commitments and Contingencies and Other Matters, page F-44

2. We note your disclosure on pages F-46 and F-47 related to your outstanding litigation with Patrick Colbus. We also note that you believe that the “potential loss” associated with this contingency is “not probable or estimable” and that you have not recorded any reserves related to this legal matter. FASB ASC 450 requires disclosure of the amount or range of reasonably possible loss as that term is defined in the standard. Please revise future filings to disclose an estimate of the reasonably possible loss or range of loss for the referenced contingency. If such an estimate cannot be made, you should include disclosures in future filings that specifically refer to your inability to estimate the reasonably possible loss or range of loss. Please refer to FASB ASC 450-20-50.

Form 10-Q For the quarterly period ended September 30, 2013

Item 4. Controls and Procedures, page 35

3. We noted disclosures herein that “Veeco’s management...conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2012 in connection with the preparation of our annual report on Form 10-K, for year ended December 31, 2012...As a result of those material weaknesses, management has concluded that our disclosure controls and procedures were not effective as of September 30, 2013”. We also noted disclosures in Item 4 of your March 31 and June 30, 2013 Form 10-Q’s that management’s disclosure controls and procedures effectiveness conclusions were based on evaluations performed *as of December 31, 2012*. In light of the referenced disclosures, please confirm, if true, that management performed an evaluation of the effectiveness of the design and operation of your disclosure controls and procedures as of March 31, June 30 and September 30, 2013. If not, tell us why you believe your current disclosure controls and procedures effectiveness conclusions are appropriate and compliant with Item 307 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

John R. Peeler
Veeco Instruments, Inc.
December 31, 2013
Page 3

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 Tara Harkins, Staff Accountant, at (202) 551-3639 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have any questions regarding our comments.

Sincerely,

/s/ Kevin L. Vaughn

Kevin L. Vaughn
Accounting Branch Chief