



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

DIVISION OF
CORPORATION FINANCE

December 27, 2012

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, 2011
Filed February 22, 2012
Form 8-K
Filed November 15, 2012
File No. 000-16244**

Dear Mr. Peeler:

We have reviewed your response letter dated December 12, 2012 and have the following comment. 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 our comment, 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 comment applies to your facts and circumstances, please tell us why in your response.

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

Form 8-K filed on November 15, 2012

Exhibit 99.1

1. We note your response to prior comment 1. Please address the following additional matters:
 - Please confirm to us that certain of your Metal Organic Chemical Vapor Deposition (MOCVD) systems and related upgrades to those systems are the only products or systems that are part of your revenue recognition accounting investigation;

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- If your investigation is only focused on your revenue recognition accounting for your MOCVD systems and related upgrades, please tell us how you concluded that none of your other products historical revenue recognition practices needed to be re-evaluated;
- Please provide to us the specific terms of your arrangements for the product transactions involved within the investigation and how the terms of your arrangements have impacted the accounting applied or required to be applied;
- Please provide to us in detail how you have accounted for these transactions in question on a historical basis.
- Please also provide to us a detailed quantified analysis of all revenue recognized for each product and/or product line involved in your investigations from 2009 to the present.
- Upon completion of your evaluation and analysis, please provide us with a summary of the results of your analysis, including details of your conclusions regarding the proper accounting for the transactions, the accounting literature you are relying on and, if applicable, your evaluation and analysis of the materiality of any adjustments arising from the analysis, with reference to the guidance in SAB 99 and SAB 108.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have questions regarding these comments. In this regard, do not hesitate to contact me at (202) 551-3643.

Sincerely,

/s/ Kevin L. Vaughn

Kevin L. Vaughn
Accounting Branch Chief