



DIVISION OF
CORPORATION FINANCE

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

July 27, 2010

Mr. Jeff Killian
Chief Financial Officer
Cascade Microtech, Inc.
2430 NW 206th Avenue
Beaverton, Oregon 97006

**Re: Cascade Microtech, Inc.
Form 10-K
Filed March 2, 2010
File No. 000-51072**

Dear Mr. Killian:

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 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.

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Form 10-K for the fiscal year ended December 31, 2009

Item 13. Certain Relationships and Related Transactions..., page 42

1. The disclosure regarding related party transactions on pages 20 and 21 of your definitive proxy statement appears limited only to transactions during 2009. In future applicable filings, please ensure your disclosure includes the entire time period required by Instruction 2 to Item 404(d) of Regulation S-K.

Notes to Consolidated Financial Statements, page F-6

Note 1. Summary of Significant Accounting Policies, page F-6

Product Warranty, page F-9

2. We see your disclosure here and on page 36 under the warranty discussion that products are sold without a right of return. We also see your disclosure under Sales Returns on page F-9 that customers may return standard products for any reason within 30 days after delivery, upon meeting certain conditions. In future filings, please reconcile these disclosures to clarify return policies.

Note 8. Patents and Purchased Intangible Assets, page F-15

3. We see you have capitalized internally developed patents. Please tell us the types of costs you capitalize with regard to internally developed patents.

Form 8-K/A filed on April 9, 2010

4. In reference to your acquisition of SUSS MicroTec Test Systems GmbH, please show us how you determined financial statements of the business acquired and pro forma financial information are not required to be filed in a Form 8-K. In that regard, please show us the results of the significance testing performed pursuant to Rules 3-05 and 11-01 of Regulation S-X.

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.

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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 Leigh Ann Schultz at 202-551-3628 or Gary Todd, Accounting Reviewer, at 202-551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Aslynn Hogue at 202-551-3841 or Geoffrey Kruczek at 202-551-641 with any other questions. You may also contact me at (202) 551-3676.

Sincerely,

for

Brian Cascio
Accounting Branch Chief