

February 25, 2009

Ms. Julia E. Griffith, Special Counsel
Office of Mergers & Acquisitions
Securities and Exchange Commission
Division of Corporation Finance
100 F Street NE, Mail Stop 3628
Washington DC 20549-3628

Re: Cascade Microtech, Inc.
Schedule TO-I
Filed January 29, 2009
File No. 5-80457

Dear Ms. Griffith:

On behalf of Cascade Microtech, Inc. (the "Company"), we submit this letter in response to the comments of the staff of the Securities and Exchange Commission (the "Staff") set forth in the letter dated February 12, 2009 (the "Comment Letter") regarding the above-referenced Schedule TO-I. In response to the comments set forth in the Comment Letter, the Schedule TO-I has been amended and the Company is filing Amendment No. 1 to the Schedule TO-I ("Amendment No. 1") with this response letter. For ease of reference, each of the Staff's comments are set forth below followed by the Company's response. Capitalized terms used but not otherwise defined in this letter have the meaning ascribed to such terms in the Offer to Exchange filed as Exhibit (a)(1)(A) to the Schedule TO-I.

Offer to Exchange

General

1. **COMMENT:** We note that you are limiting participation in this tender offer to U. S. employees who hold Eligible Options. Please furnish a legal analysis explaining why you believe limiting offer participation in this way is consistent with the requirement of Rule 13e-4(f)(8)(i) that the offer be open to all security holders of the class that is subject to the offer. While the Commission's March 21, 2001 Global Exemptive Order provides some relief from the requirement to make a tender offer available to all target security holders, you must establish that your eligibility criteria excluding certain holders of target securities are compensationrelated. Please provide your legal analysis as to why the exclusion of certain otherwise-eligible option holders is appropriate here.

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RESPONSE: We believe that the exclusion of the Company's foreign employees from the Offer is permissible under the Commission's March 21, 2001 Global Exemptive Order (the "Exemptive Order") because the criteria for the exclusion is compensation-related. The compensation plans and programs that the Company has adopted for its foreign employees are designed to meet local country objectives, which include remaining competitive as to the attraction and retention of employees and maintaining compliance with local regulatory requirements. As a result of differences in competitive compensation and benefit arrangements, tax and regulatory requirements and the costs of administering compensation and benefit plans in the United States as compared to the foreign countries in which the Company operates, the Company's foreign employees typically have compensation packages with components that differ in form and amount from the compensation packages of the Company's domestic employees. For example, the Company's foreign employees are often eligible for programs not generally made available to employees in the United States, including programs providing for housing allowances, auto allowances and more extensive vacation time. Some of the Company's foreign employees also have different programs and arrangements for cash compensation, equity awards and health care benefits than do employees in the United States. Accordingly, changes in compensation arrangements for the Company's domestic employees are not necessarily replicated for foreign employees, and vice versa.

In considering and approving the Offer, the Compensation Committee of the Company's Board of Directors (the "Committee") sought to enhance the incentive value of the equity awards held by the Company's employees. Based on its belief that foreign tax and regulatory requirements could limit the cost-effectiveness and value of the Offer to the Company and its foreign employees, the Committee, exercising its discretion and business judgment in making decisions regarding the Company's compensation matters, decided to exclude the Company's foreign employees from the Offer. However, because the Committee determined that it was appropriate to take other action to enhance the equity incentives of the Company's foreign employees, the Committee granted new awards of restricted stock units to the Company's foreign employees on February 6, 2009. We believe that the determination of the Committee to differentiate between the Company's foreign and domestic employees in the adoption and administration of the Company's compensation and benefit programs is within the Committee's discretion and authority, and that the Committee's decision to exclude foreign employees from the Offer in furtherance of its compensation policies and programs is permissible under the Exemptive Order, which specifically states that "[T]his exemption eliminates the limitations that the all holders and best price rules place on issuers' ability to structure exchange offers in a manner consistent with their compensation policies and practices."

2. **COMMENT:** See our last comment above. As indicated, you state on the cover page of the Offer to Exchange that the offer is limited to "all persons employed by us in the United States," thereby excluding foreign employee option holders. However, the

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disclosure later in the offer materials (see the second full paragraph on page 21) appears to be inconsistent. There, you state that "you may exclude employees located outside of the United States from the Offer if local law or administrative considerations would make their participation infeasible or impractical." Please revise your offer materials to clarify whether all foreign employees are excluded from this offer, or only those in select jurisdictions. If the latter, we note that the all-holders provision in Exchange Act Rule 13e-4(f)(8) applies equally to U.S. as well as non-U.S. target holders. Refer to the interpretive guidance in Section II.G.1. of SEC Release 33-8957. As noted in the last comment above, the Global Exemptive Order modifies this requirement only to extent you can demonstrate a compensation-related reason for exclusion. Excluding foreign option holders due to administrative or other expense is not covered under the Order. Please revise or advise.

RESPONSE: All of the Company's foreign employees are excluded from the Offer. See also response to Comment 1 above.

3. **COMMENT:** Paragraph 5 of the Restricted Stock Unit Agreement states that Restricted Stock Units will be paid to Employees "as soon as practicable following the date of vesting." However, this appears to be inconsistent with the disclosure in the Offer to Exchange, which states that (i) the restricted units will be issued to participating option holders immediately after expiration; and (ii) the common shares underlying those restricted units will be issued only upon vesting, which will occur annually over a period of four years. If the restricted units themselves, rather than the underlying shares, were to be delayed, we would have concerns under the prompt payment requirement in Rule 14e-1(c). Please revise or advise.

RESPONSE: The restricted stock units, which are referred to in the Offer to Exchange as "New Awards" will be issued promptly after the Expiration Time. See response to Comment 4 below. Paragraph 5 of the Restricted Stock Unit Agreement refers to the issuance of shares of common stock upon the vesting of Restricted Stock Units. One share of common stock will be issued for each vested Restricted Stock Unit as soon as practicable following the date of vesting.

Summary Term Sheet and Questions and Answers, page 1

What is the Offer? page 2

4. **COMMENT:** Here and throughout your offering document, you state that the New Awards will be granted "shortly after" the Expiration Time. Revise to comply with the requirement of Rule 14e-4(f)(5) that the New Awards be granted "promptly" after the Expiration Time.

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RESPONSE: Notwithstanding the use of the term “shortly after,” the Company intends to grant the New Awards “promptly” after the Expiration Time as required by Rule 14e-4(f)(5).

Are employees who tender their Eligible Options and are on a leave of absence on the date the New Awards are granted eligible to participate? page 5

5. **COMMENT:** Rule 14e-4(f)(5) requires you to pay promptly after the termination of the Offer. You disclose here that if a tendering option holder is on leave that is not protected by statute on the date New Awards are granted, then the restricted stock units will be issued on the date, if any, that the employee returns to regular employment. Provide your legal analysis as to how this complies with the prompt payment requirement in our rules, or revise.

RESPONSE: Amendment No. 1 amends the Offer to Exchange to make it clear that any Eligible Employee who tenders Eligible Options and is on a leave of absence on the date the New Awards are granted will receive the New Awards on the date they are granted, i.e., promptly after the Expiration Time.

The Offer

Conditions of the Offer, page 15

6. **COMMENT:** In our view, you may condition a tender offer on any number of conditions, as long as they are described with reasonable specificity, capable of some measure of objective verification, and outside of your control. Please expand or revise the final bullet point in this section, which currently conditions the offer on any change or changes to your business, which appears to include all changes, positive or negative, that may be material to you.

RESPONSE: Amendment No. 1 amends the Offer to Exchange to delete the condition set forth in the final bullet point.

Financial Information, page 22

7. **COMMENT:** Please revise Schedule B to the Offer to Exchange to include all of the summary information required by Item 1010(c). You do not appear to have included the information required by Item 1010(c)(4) and (5).

RESPONSE: Amendment No. 1 amends Schedule B to the Offer to Exchange to provide the information required by Item 1010(c)(5). Item 1010(c)(4) is not applicable to the Company.

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Closing Comments

Pursuant to the Staff's request, the Company hereby acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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.

If you have any questions or additional comments, please call me at (503) 226-8449.

Very truly yours,

/s/ Gregory E. Struxness
Gregory E. Struxness

cc: Geoff Wild
Steven Sipowicz