

Via Facsimile and U.S. Mail
Mail Stop 6010

September 19, 2006

Mr. Stephen D. Chubb
Director, Chairman and Chief Executive Officer
Matritech, Inc.
330 Nevada Street
Newton, MA 02460

Re: Matritech, Inc.
Form 10-K for Fiscal Year Ended December 31, 2005
Form 10-Q for Fiscal Quarter Ended June 30, 2006
File No. 1-12128

Dear Mr. Chubb:

We have reviewed your filings 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 our comments, we ask you to provide us with more information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filings. We look forward to working with you in these respects. We welcome any questions you may have about our comment or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the year ended December 31, 2005

Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations, page 41

1. Please provide us in a disclosure-type format revised discussions regarding your revenue fluctuations from comparative periods to separately quantify the fluctuations attributable to price and volume changes as required by Rule 303(a)(3)(iii) of Regulation S-K.

Liquidity and Capital Resources, page 49

2. Please explain to us how your Days Sales Outstanding, or DSO, decreased from 43 days at December 31, 2004 to 40 days at December 31, 2005 when your accounts receivable for the comparable periods increased at a greater rate than your annual revenues. In your response, please provide us your DSO computations for December 31, 2004 and 2005 as well as for June 30, 2006.

Critical Accounting Policies and Estimates, page 58

3. Please provide us in a disclosure-type format a revised discussion that shows how accurate your estimates have been in the past by disclosing for each period presented how they have changed in the past and whether and to what extent your estimates at the latest balance sheet are reasonably likely to change in the future.

Revenue Recognition, page 58

4. Please reconcile your disclosure herein that you recognize deferred product revenue when your distributor reports it has either utilized the product or the product shelf life has expired to the disclosure in your policy footnote on page F-10 where you indicate that you recognize this deferred revenue when the distributor reports that it has been shipped or disposed. Please also tell us your policy for accepting returns and explain why the recognition of revenue upon the expiration of the shelf life is appropriate.

Consolidated Financial Statements

Note 12: Subsequent Events, page F-29

5. It appears that the registration rights provisions of your January 2006 Secured Convertible Notes and related warrants are similar to those of your March 2005 Series A Convertible Preferred Stock and related warrants. However, your accounting for a registration rights liability in the case of the former and a warrant liability in the case of the latter does not appear to be consistent. Please explain to us your accounting for each of these issuances and reference the authoritative literature you relied upon to support your accounting. If you used differing accounting models for your instruments and believe both comply with GAAP, please tell us how this accounting change complies with GAAP. Please refer to APB 20 including paragraphs 15 and 16.

Form 10-Q for the quarter ended June 30, 2006

Financial Statements (Unaudited)

Condensed Notes to Unaudited Consolidated Financial Statements

Note 2: Summary of Significant Accounting Policies

(e) Stock-Based Compensation, page 7

6. Please provide us in a disclosure-type format a revised disclosure of your accounting policy for your options granted with performance-based vesting under SFAS 123R. Please disclose the nature of the performance criteria and how you recognize compensation expense for these instruments.
7. Please explain to us why your unrecognized compensation cost related to restricted stock and restricted stock units granted under your stock plans at June 30, 2006 is only \$146,366 when the fair value of your 2006 grants appears to be approximately \$382,000 and it does not appear that you recorded any significant compensation for these grants through June 30, 2006.

Note 5: Secured Convertible Notes, page 12

8. Please provide us in a disclosure-type format an explanation of your accounting for the unamortized debt discount associated with notes converted by the noteholders before maturity.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides the requested information. Detailed letters greatly facilitate our review. Please furnish your letter to us via EDGAR under the form type label CORRESP.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

In connection with responding to our comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

If you have any questions, please contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant