

Mail Stop 4561

April 14, 2006

Mark Fusco
President and Chief Executive Officer
Aspen Technology, Inc.
Ten Canal Park
Cambridge, MA 02141

Re: Aspen Technology, Inc.
Form 10-K for Fiscal Year Ended June 30, 2005
Forms 10-Q for Fiscal Quarter Ended September 30, 2005 and
December 31, 2005

Dear Mr. Fusco:

We have reviewed your response to our letter dated February 28, 2006 in connection with our review of the above referenced filings and have the following comments. Please note that we have limited our review to the matters addressed in the comments below. We may ask you to provide us with supplemental information so we may better understand your disclosure. Please be as detailed as necessary in your explanation. 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 filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments 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 Fiscal Year Ended February 28, 2005

Management Report on Internal Control Over Financial Reporting,
page
M-1

1. We note your response to our previous comment 1 where you indicate that the post closing adjustments that impacted prior quarters was less than \$400,000. Please provide a breakdown of the individual adjustments by quarter and tell us how you determined whether such adjustments were material to the quarters in which they should have been recorded.

Form 10-Q For the Quarterly Period Ended September 30, 2005

Note 4. Stock-Based Compensation, page 8

2. Please refer to comment 7 in our letter dated February 28, 2006. We have reviewed your response and note that the decrease in the volatility assumption used to value the stock options was a result of determining the volatility assumption for the prior year based on a historical analysis looking back three to five years. Note that paragraph 285 of SFAS 123 states that historical volatility of the stock over the most recent period that is generally commensurate with the expected option life should be considered in estimating expected volatility. Tell us whether you believe three to five years is commensurate with the expected option life in the prior year. If it is not, quantify the difference in the prior periods had the estimated volatility been based on a period commensurate with the expected lives of the options.

3. With regards to the incorrect volatility assumption that was used in the pro forma calculations for the Company's stock purchase plan shares, please confirm that you intend to revise your assumptions in your next Form 10-Q filing to properly reflect a volatility of 42% for such plan.

4. Also, tell us what consideration you have given to include a discussion of stock-based compensation in your Critical Accounting Policy disclosures, particularly considering the level of estimates and assumptions used in determining the Company's stock-based compensation expense.

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As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. You may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter with any amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing any amendment and your responses to our comments.

You may contact Patrick Gilmore at (202) 551-3406 or me at (202) 551-3730 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Kathleen Collins
Accounting Branch Chief

Mark Fusco
Aspen Technology, Inc.
April 14, 2006
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