

September 22, 2006

Via Edgar

Securities and Exchange Commission
Division of Corporate Finance
One Station Place
100 F Street, NE
Washington, D.C. 20549-4561
Attention: Tom Ferraro

Re: Aspen Technology, Inc.
Item 4.02 Form 8-K
Filed on September 6, 2006
File No. 0-24786

Ladies and Gentlemen:

Set forth below please find the responses of Aspen Technology, Inc. (the "Company") to the comment of the staff (the "Staff") of the Securities and Exchange Commission (the "SEC") set forth in the letter, dated September 12, 2006, from Tom Ferraro, Senior Staff Accountant of the SEC, to Mark Fusco, President and Chief Executive Officer of the Company, with respect to Item 4.02 of the Form 8-K referenced above.

For convenient reference, the Company has set forth below in italics the Staff's comment set forth in the comment letter.

Form 8-K filed September 6, 2006

1. *We note the disclosures in your Form 8-K regarding questions over back-dating of stock options. Please tell us the current status of your review and explain what consideration you have given to the accounting and disclosure implications of SFAS No. 5, "Accounting for Contingencies" and FIN 14, "Reasonable Estimation of the Amount of a Loss." In this regard, tell us what consideration you gave to including disclosure and discussion of this issue's potential impact on the qualification of the Company's stock option plan, claims or litigation by affected option and stockholders, and possible legal or regulatory action by the Internal Revenue Service or other regulatory bodies.*

The review of the Company's stock option granting practices, including the associated accounting and financial reporting consequences, is being conducted by an independent board subcommittee and is nearly complete. The Company expects to file its Form 10-K for the year ended June 30, 2006 (the "Form 10-K") by September 28, 2006, which is the final day of the extension period established by the Company's filing of a Form 12b-25. The Form 10-K will include disclosure of the results and financial statement impact of the stock option review. In the pending Form 10-K, Item 8 *Financial Statements and Supplementary Data* will

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include restated audited financial results as of June 30, 2005 and for the years ended June 30, 2004 and 2005, and Item 6 *Selected Financial Data* will include restated financial results as of June 30, 2002 through 2005, and for the years ended June 30, 2002 through 2005, as well as condensed restated financial results for the years ended June 30, 1999, 2000 and 2001. In addition, Item 7 will include restated financial results for each of the quarters of the year ended June 30, 2005 and for each of the first three quarters of the year ended June 30, 2006.

The following information will be included in the Notes to Consolidated Financial Statements, describing the findings of the review:

- In connection with the preparation of financial statements for the fiscal year ended June 30, 2006, a subcommittee of independent directors was appointed to review the Company's accounting treatment for stock options granted in prior years.
- Based upon the subcommittee's investigation, the Audit Committee and Company management determined that certain option grants during fiscal years 1995 through 2004 were accounted for improperly.
- The Audit Committee and Company management also concluded that stock-based compensation associated with the grants was misstated in fiscal years 1997 through 2005, and in the nine months ended March 31, 2006. The impact on the Company's operating results will be quantified.
- The subcommittee identified a variety of measurement date errors incorrectly ascribing a measurement date to a pool of options before such time as the options had been specifically allocated and communicated.
- As a result of the errors in determining measurement dates, the Company has also recorded payroll withholding and other tax-related adjustments for certain options formerly classified as Incentive Stock Option (ISO) grants. The Company's estimate of this loss contingency will be quantified.

The Company will address its assessment of several contingencies in the Form 10-K with consideration of SFAS No. 5 and FIN 14. Subsequent to the filing of the Form 8-K, the Company was named as a defendant in securities class action lawsuits. The following information will be included in the Notes to Consolidated Financial Statements, describing the lawsuits:

- The Company and certain of its officers and directors were named as defendants in securities class action lawsuits filed in Massachusetts federal district court.

- Those lawsuits allege violations of the Exchange Act and claim material misstatements concerning the Company's financial condition and results. No consolidated amended complaint has been filed and no class has been certified.
- The Company believes that plaintiffs' claims lack merit and intends to litigate the dispute vigorously. The Company is currently unable to determine whether resolution of these matters will have a material adverse impact on its financial position or results of operations, or to reasonably estimate the amount of the loss, if any, that may result from resolution of these matters. However, the ultimate outcome could have a material adverse effect on the Company's financial position or results of operations.

In addition, the Company has assessed the potential for legal or regulatory action from government entities. Specifically, the Company has recorded its estimate of a contingent loss associated with additional payroll withholding and other taxes as described above.

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In general, the Company's stock options plans do not have any prohibitions on granting "in-the-money" stock options, and as such the Company does not believe that the stock option issue will have any effect on the qualification of the Company's stock option plans. However, the 1995 Director Stock Option Plan, which provided for grants of nonqualified stock options to directors of the Company, required that all options granted thereunder have an exercise price equal to fair market value. The subcommittee found that the measurement date associated with grants of options to purchase 28,500 common shares under this plan in 2000 (the "Director Options") was determined in error, and as such the Director Options were granted with an exercise price below fair market value. None of the Director Options have been exercised to date. Director Options covering 27,000 shares expired upon director departures. The remaining Director Options, covering a total of 1,500 shares, are currently outstanding. Because the Director Options were granted as nonqualified options, there are no related issues of disqualification of ISO classification (or any related issues with respect to withholding taxes). As the result of the subcommittee's findings, the Company now regards the Director Options as having been issued on a "standalone" basis, rather than under the 1995 Director Stock Option Plan. The grants of the Director Options were approved by the board of directors and, because the Director Options were issued as nonqualified options, those grants did not require stockholder approval under the Internal Revenue Code, Nasdaq National Market requirements, or any other applicable regulations. Because the Director Options were not granted under a plan covered by a Registration Statement on Form S-8, (a) any exercise of the Director Options will need to comply with an exemption from registration under the Securities Act of 1933 and (b) any subsequent sale of shares acquired upon such an exercise will need to be the subject of a registration statement (on a form other than Form S-8) or will need to comply with an exemption from registration. It is expected that any future sale of shares upon exercise of a Director Option would be effected in accordance with Section 4(2) of the Securities Act, and that any subsequent resale of those shares would be effected in accordance with Rule 144 or another available exemption.

* * *

The Company acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in each of its filings with the SEC, including the Form 8-K to which the above comment and response relate;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the SEC 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 SEC or any person under the federal securities laws of the United States.

Please do not hesitate to contact the undersigned (617-949-1522) with any questions regarding this response letter.

Very truly yours,

/s/ Bradley T. Miller

Bradley T. Miller
Senior Vice President and Chief Financial Officer
Aspen Technology, Inc.
