



July 27, 2010

Via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
One Station Place
100 F Street, NE
Washington, D.C. 20549-4561

Re: Aspen Technology, Inc.
Form 10-K for the Fiscal Year Ended June 30, 2009 (Filed November 9, 2009 and amended April 22, 2010)
Form 10-Q for the Fiscal Quarter Ended December 31, 2009 (Filed February 9, 2010)
File No. 000-24786

Ladies and Gentlemen:

This letter is being filed by Aspen Technology, Inc. (the "Company") in response to comments set forth in a letter dated July 27, 2010 from Kathleen Collins, Accounting Branch Chief of the Division of Corporation Finance of the Securities and Exchange Commission (the "SEC"), to Mark P. Sullivan, Senior Vice President and Chief Financial Officer of the Company.

For convenient reference, the Company has set forth below in italics each of the comments of the staff of the SEC set forth in the comment letter and has keyed the Company's responses to the numbering of the comments and the headings used in the comment letter.

Form 10-Q for the Fiscal Quarter Ended December 31, 2009

Management Discussion and Analysis of Financial Condition and Results of Operations

General

- We note from your response to prior comment 1 that the company applies the VSOE of fair value of SMS from your legacy term license arrangements to our new point product arrangements pursuant to the guidance in ASC 985-605-55-67. We further note from our conversation with the company on July 26, 2010 that because you no longer offer the legacy term license arrangements, there may come a point in time where you are unable to establish VSOE for your new point product arrangements and accordingly, such arrangements may become subject to ratable revenue recognition. Please confirm that, if material, you will enhance your disclosures (i.e. business overview, results of operations, risk factors, etc) in future filings to address how the accounting for these arrangements may change if you are no longer able to establish VSOE of fair value for SMS and the impact of such change on your financial condition and results of operations. Also, to the extent material, please confirm that you will enhance your critical accounting policy disclosures to address the risks and assumptions involved in accounting for your point product arrangements.*

The Company acknowledges the Staff's comments, and confirms that our Form 10-K for fiscal 2010 will include enhanced disclosures addressing the risks and assumptions related to the accounting for point product arrangements, including the potential impact that the loss of VSOE of fair value could have on the financial statements of future filings.

New Licensing Model, page20

- We note your discussion regarding your transition to a new term licensing subscription model in fiscal 2010 (the aspenONE license model), which appears to be the focus for a significant source of the company's future revenue stream. We further note that as a result of movement to the aspenONE license model, part of the focus in analyzing your business will now be on the change in the value of your installed customer base and software license bookings. To the extent these arrangements are firm commitment orders, tell us what consideration you gave to disclose the total contract value of your term license subscription arrangements (i.e. backlog) pursuant to Item 101(c)(viii) of Regulation S-K. In addition, please clarify that you will provide a quantified discussion of regarding your installed customer base and license bookings in future filings. In this regard, to the extent that revenues recognized from your subscription arrangements are expected to have a significant impact on the variability of your results, you should discuss and analyze changes in your bookings and customer base as part of your MD&A. We refer you to Section III.B of SEC Release 33-8350.*

The Company acknowledges the Staff's comments, and agrees that bookings and backlog are useful to investors during the transition to the new aspenONE licensing model. It is the Company's intention to provide a quantitative discussion of certain key business metrics used by management in our Form 10-K for fiscal 2010, as further discussed in our April 22, 2010 response to the Staff's March 12, 2010 letter regarding comment 13.

If you would like to discuss our responses or any further questions you may have, please do not hesitate to contact me at 781-221-5201.

Respectfully,

/s/ Mark P. Sullivan

Mark P. Sullivan
Senior Vice President and Chief Financial Officer

cc:

Kathleen Collins, Accounting Branch Chief, Securities and Exchange Commission
Melissa Feider, Staff Accountant, Securities and Exchange Commission
Katherine Wray, Staff Attorney, Securities and Exchange Commission
Mark E. Fusco, President and Chief Executive Officer, Aspen Technology, Inc.
Frederic G. Hammond, Senior Vice President and General Counsel, Aspen Technology, Inc.
Mark L. Johnson, Cooley LLP