

**Mail Stop 4561**  
**Via Fax (781) 221-5215**

May 13, 2010

Mark P. Sullivan  
SVP and Chief Financial Officer  
Aspen Technology, Inc.  
200 Wheeler Road  
Burlington, MA 01083

**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 on February 9, 2010**  
**File No. 000-24786**

Dear Mr. Sullivan:

We have reviewed your response letter dated April 22, 2010 in connection with the above-referenced filings and have the following comments. If indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comments are inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may raise additional comments. Unless otherwise noted, where prior comments are referred to they refer to our letter dated March 12, 2010.

Form 10-K for the Fiscal Year Ended June 30, 2009

Item 1. Business

General

1. We note your response to prior comment 1, in which you acknowledge that your business is materially dependent on the System License Agreement with the Massachusetts Institute of Technology, as amended. However, this license does not appear to be discussed in your Form 10-K, as originally filed or as amended. As stated in our prior comment, your business disclosure should discuss any material third-party licenses. Accordingly, please ensure that your future filings discuss the material terms of the System License Agreement and any other material license agreements. Please confirm your understanding in this regard.

Item 15. Exhibits and Financial Statement Schedules

Note 3. Restructuring Charges, page F-23

2. We note from your response to prior comment 10 that you “consider” all current and future charges in determining the initial measurement of fair value of your restructuring charges. We believe the intent of ASC 420-10-50-1(a) and (b)(1) is to disclose an estimate of restructuring charges you expect to incur and their completion date. In this regard, we believe that if you have any plans to incur additional restructuring charges but did not meet the criteria for recognizing and measuring the restructuring charges as of your latest balance sheet date, then you should provide these disclosures. This disclosure would not include revisions to timing or estimates to currently accrued charges.

Form 10-K/A for the Fiscal Year Ended June 30, 2009

Item 11. Executive Compensation

Compensation Discussion and Analysis

Reasons for Providing, and Manner of Structuring, the Key Compensation Elements in Fiscal 2009

Variable Cash Compensation, page 17

3. You disclose that “operating margin” or “operating income” is one of the corporate financial targets used to determine cash incentive compensation for your named executive officers, and you briefly describe how this figure is calculated from the company’s income from operations. As the “operating income” metric used to determine executive compensation appears to be a non-GAAP financial measure, please clearly identify it as such, if applicable, in future filings. Refer to Instruction 5 to Item 402(b) of Regulation S-K.

2009 Operations Plan, page 18

4. We note the revisions to your Compensation Discussion and Analysis made in response to prior comments 6 and 7. You have provided quantitative disclosure of the operating income target used to determine 70% of the bonuses payable to four of your named executive officers under the 2009 Executive Plan, as well as of the actual achievement against this target. However, you do not appear to have provided quantitative or sufficient qualitative disclosure of the commission element that you indicate constitutes 75% of the bonus payable to Mr. Kotzabasakis under the 2009

Operations Plan. In your response letter and in future filings as applicable, please explain more specifically the “regional operating and contribution margins” and “quarterly regional or consolidated financial results” used to determine the bonus payable to Mr. Kotzabasakis. In addition, please confirm, if true, that you have omitted quantitative disclosure of these performance targets pursuant to Instruction 4 to Item 402(b) of Regulation S-K and that you have a competitive harm analysis that supports your reliance on this instruction.

Item 13. Certain Relationships and Related Transactions

Related-Party Transactions, page 32

5. We note the disclosure added to your Form 10-K, as amended, in response to prior comment 9 and pursuant to Item 404 of Regulation S-K. In particular, we note your disclosure on page 33 that the board has determined that a “transaction that is specifically contemplated by provisions of [y]our charter or bylaws” does not create a material direct or indirect interest on behalf of related persons and, therefore, is not related person transactions for purposes of your review policy. Please explain more specifically what sort of transaction is contemplated by this exception from the definition of related person transactions under your policy, and how the board determined that such transactions do not create a material direct or indirect interest on the part of related persons within the meaning of Item 404(a), such that it is appropriate to exclude such transactions from review as related-party transactions. Further, please confirm that your statement on page 32 that there were no related-party transactions from July 1, 2008, through March 5, 2010, applies to all related-party transactions required to be disclosed pursuant to Item 404(a), notwithstanding the aforementioned exception for transactions contemplated by your charter documents. Provide clarifying disclosure on this matter in future filings.

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

Condensed Consolidated Statements of Operations, page 2

6. We note from your response to prior comment 14 that you allocate point product licenses with SMS included for the full license term (i.e., your co-terminus arrangements) between software and services and other revenue based on vendor specific evidence (“VSOE”) of fair value. Please clarify your methodology for allocating this revenue stream. In this regard, please tell us if you allocate these arrangements using VSOE from your other arrangements (e.g., your perpetual license or legacy license arrangements), how you determined your methodology was reasonable, and if you have consistently applied it.
7. Additionally, the figures provided in your response for revenue and cost of revenue classified within software, subscription, and services appear to be for all arrangements, as the information reconciles with your consolidated financial statements. Please

Mark P. Sullivan  
Aspen Technology, Inc.  
May 13, 2010  
Page 4

provide us with the information that we previously requested only for your co-terminus arrangements. If these arrangements are material, then please tell us how you considered disclosing the allocation methodology used to classify the arrangement.

Please 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. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response 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 response to our comments.

You may contact Melissa Feider, Staff Accountant, at (202) 551-3379 or me at (202) 551-3499 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Katherine Wray, Staff Attorney, at (202) 551-3483.

Sincerely,

Kathleen Collins  
Accounting Branch Chief