



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

December 9, 2010

Mr. James E. Levine  
Chief Financial Officer  
Verenium Corporation  
55 Cambridge Parkway  
Cambridge, Massachusetts 02142

**Re: Form 10-K for the Year Ended December 31, 2009  
Form 10-Q for the Period Ended September 30, 2010  
Definitive 14A filed April 30, 2010  
File No. 0-29173**

Dear Mr. Levine:

We have reviewed your response letter dated November 29, 2010 and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

General

1. Please provide Tandy language signed by the company.

Form 10-Q for the Period Ended September 30, 2010

Statements of Operations, page 4

2. You describe the line item which is determined by taking revenues less operating expenses as loss from continuing operations on the face of your statements of operations. Given that loss from continuing operations would imply that other

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income and expenses of a non-operating nature were included in the determination of this line item, please revise your description of this line item in future filings. For example, you could describe this line item as loss from operations in a similar manner to your description on the statements of operations included in your Form 10-Q for the period ended June 30, 2010 and your Form 10-K for the year ended December 31, 2009.

Definitive 14A filed April 30, 2010

Summary Compensation Table, page 45

3. We note your response to comment 16 of our letter dated October 29, 2010. Please confirm to us that in future filings, you will represent accurate numbers in the summary compensation table for each of your named executive officers, including the sum of compensation in the "total" column.

You may contact Sherry Haywood, Staff Attorney, at (202) 551-3345 or Pamela Long, Assistant Director, at (202) 551-3760 if you have any questions regarding legal matters. Please contact Nudrat Salik, Staff Accountant, at (202) 551-3692 or me at (202) 551-3769 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Rufus Decker  
Accounting Branch Chief