



DIVISION OF  
CORPORATION FINANCE

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

November 24, 2010

Via Facsimile and U.S. Mail

Mr. James Dorst  
Chief Financial Officer  
SpectraScience, Inc.  
11568 Sorrento Valley Rd., Suite 11  
San Diego, California 92121

**Re: SpectraScience, Inc.**  
**Form 10-K for the Year Ended December 31, 2009**  
**Filed March 31, 2010**  
**Form 10-Q for the Quarter Ended September 30, 2010**  
**File No. 000-13092**

Dear Mr. Dorst:

We have reviewed your filings 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 amending your filings, 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 or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filings and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2009

Item 7. Management's Discussion and Analysis, page 21

1. We note your statement that your disclosure contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended. Please revise your future filings to eliminate the reference to these sections as the statutory safe harbors adopted as part of

the Private Securities Litigation Reform Act of 1995 do not apply to statements made by penny stock issuers. Refer to Section 27A of the Securities Act and Section 21E of the Securities Exchange Act.

Notes to Consolidated Financial Statements, page 32

Note 2. Significant Accounting Policies, page 32

-Revenue Recognition, page 32

2. We note from page 7 and throughout the filing that you sell your products to distributors. Please revise your future filings to explain the nature and significant terms of these arrangements with distributors, including any post shipment obligations and acceptance provisions that may exist and how you account for such obligations. Within your discussion, please explain if you grant price concessions to your distributors and, if so, how you account for price concessions.

-Valuation of Long-lived Assets, page 33

3. We note here and on page 35 that you have capitalized equipment/inventory related to your LUMA systems is not currently being depreciated but is reviewed for impairment at the end of each reporting period. Please explain to us the nature of the assets related to your LUMA systems and why you are classifying this as plant, property, and equipment. Please also discuss why you concluded that the assets should not be depreciated but instead evaluated for impairment on at the end of each reporting period. Cite the accounting literature relied upon and how you applied it to your situation.
4. Further to the above, we note that you evaluated the ongoing value of your LUMA equipment at December 31, 2009 and June 30, 2010 and that you wrote-down this equipment by \$761,000 and \$205,000 during the year ended December 31, 2009 and the six months ended June 30, 2010 Form 10-Q, respectively. We finally note that you wrote-off the remaining balance during the three months remaining balance of these assets during the three months ended September 30, 2010. Please tell us how you determined the amount of impairment to recognize related to this equipment at each reporting date. As applicable, explain how you considered the guidance in section 360-10-35 of the FASB Accounting Standards Codification.
5. We further note from page 24 that you classified the impairment losses for LUMA equipment as research and development expenses within your consolidated statement of operations. Please explain to us the basis for your classification.

-Patents, page 34

6. With respect to the LUMA patents, please tell us how you have considered whether there have been any events or changes in circumstances that indicate that the carrying amount of the assets may not be recoverable. Refer to paragraph 360-10-35-21 of the FASB Accounting Standards Codification. In this regard, we note that you have reported net operating losses in all recent periods and that you separately determined that certain other LUMA assets were impaired in each of the year ended December 31, 2009 and the nine months ended September 30, 2010.
7. We note your disclosures related to the fair value of the patent intangible assets associated with the LUMA acquisition were valued based upon an independent appraisal. While in future filings management may elect to take responsibility for the valuations, please note that if you continue to refer to the work of the third party in a Form 10-K that is incorporated by reference into a registration statement, you may be required to obtain and include a consent from the third party. Refer to Compliance and Disclosure Interpretation 141.02, available at our website at <http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm>.

Note 3. Inventories, page 36

8. We note your disclosures here, page 31, page 33 and on page 36 that you recognized a \$100,000 provision for inventory obsolescence during the year ended December 31, 2009. We further note from your September 30, 2010 Form 10-Q that your sales have decreased by approximately 82% from for the six months ended September 30, 2010 as compared to the six months ended September 30, 2009 while during the same time your inventory balance has increased as of June 30, 2010. Finally, we note that your inventory balances at December 31, 2009 and September 30, 2010 represents over one years worth of inventory based on 2009 sales and sales for the nine months ended September 30, 2010. Considering these factors, please provide us with additional detail regarding how you evaluated your inventory for recoverability as of December 31, 2009 and September 30, 2010.
9. We further note from page 24 that you classified provision for inventory obsolescence as research and development expenses within your statement of consolidated operations. Please explain to us the basis for this classification, citing any authoritative literature.

Item 9A(T). Control and Procedures, page 40

10. We note your disclosure regarding your officers' conclusions about the effectiveness of the Company's disclosure controls and procedures. We note that the language that appears after your conclusion differs from the definition of disclosure controls and procedures as set forth in Rule 13a-15(e) of the Exchange Act. While you are not required to include the definition of disclosure controls and procedures, when you do, all

of the language must be consistent with the language that appears in the two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e) of the Exchange Act. Please revise future filings to either include the full two-sentence definition or to remove the definition.

Form 10-Q for the quarterly period ended September 30, 2010

Item 2. Management's Discussion and Analysis, page 11

Results of Operations, page 12

11. We note that your revenue increased from approximately \$2,000 to \$3,000 for the three months ended September 30, 2009 and September 30, 2010, respectively, and decreased from approximately \$122,000 to \$22,000 for the nine months ended September 30, 2010 and September 30, 2009, respectively. In light of the material variances in your revenue which is not discussed or analyzed, your MD&A disclosure appears broad and does not provide a thorough analysis that provides investors a view of the company through the eyes of management. When individual line items, disclosed in your statements of operations, significantly fluctuate in comparison to the comparable prior period, please quantify and disclose the nature of each item that caused the significant change. For example, please quantify each material factor (i.e., such as price changes and volume changes by type of product), disclose separately the effect on operations attributable to each factor causing the aggregate change from period to period and disclose the nature of or reason for each factor causing the aggregate change. The analysis should reveal underlying material causes of the factors described and any future impact on operating results. Please apply this comment to all of the disclosures in the discussion and analysis of your results of operations section of your applicable future filings. See Item 303 of Regulation S-K.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and

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- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding these comments. Please contact Joe McCann, Staff Attorney, at (202) 551-6262, or Tim Buchmiller, Reviewing Attorney, at (202) 551- 3635 if you have questions on any other comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin L. Vaughn  
Accounting Branch Chief