



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

October 17, 2008

Via U.S. Mail and Facsimile

Mr. Guy A. Childs
Vice President and Chief Financial Officer
The Spectranetics Corporation
96 Talamine Court
Colorado Springs, Colorado 80907

Re: The Spectranetics Corporation
Form 10-K for the Year Ended December 31, 2007
Filed March 17, 2008
File No. 000-19711

Dear Mr. Childs:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Where indicated, we think you should revise your document in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K as of December 31, 2007

Financial Statements, page F-1

Consolidated Statements of Operations and Comprehensive Income (Loss), page F-4

1. We note that you record service revenue related to the sale of your excimer laser units, and that the amount is in excess of ten percent of total revenue for each of the periods presented, based on the disclosure in Note 14. Please revise the consolidated statements of operations in future filings to separately present service revenues and the related cost of services as required by Item 5-03(b)(1) and (2) of Regulation S-X, or tell us and clarify in future filings why you believe the current presentation is appropriate.

Note (1) Summary of Significant Accounting Policies, page F-7

(k) Revenue Recognition, page F-8

2. We note from page 13 that you market and sell your products in Europe, the Middle East and Russia through your wholly-owned subsidiary and through distributors. In future filings expand your revenue recognition policy to specifically address transactions with distributors including payment, return, exchange, price protection, discounts, sales incentives and other significant matters. Refer to SAB 104 and SFAS 48 as necessary.

Form 10-Q for the Quarterly Period Ended June 30, 2008

Note (3) Composition of Certain Financial Statement Items, page 6

3. We note that you have valued your outstanding auction rate securities at par value as of June 30, 2008. You state that you do not believe the carrying values of these auction rate securities are permanently impaired and you believe the position will be liquidated without any significant loss. However, you have also reclassified these investments as noncurrent assets as of June 30, 2008, indicating that you do not expect to realize the full fair value within the next twelve months. In light of the failed auctions, please explain to us why you believe there has not been a decline in the fair value of these securities as of June 30, 2008. Tell us how your valuation has considered the limited secondary markets that have developed whereby these securities are being sold at a significant discount to par value.
4. Further to the above, you state that your estimate of the fair value of the auction rate securities as of June 30, 2008 is based in part on recommended fair values provided by your broker. Please tell us the extent to which your valuation of the auction rate securities as of June 30, 2008 is based on the fair values provided by your broker. In addition, tell us whether the fair values provided by your broker represented an offer to

purchase. If not, explain to us why you determined reliance on the information provided by the broker represented the best estimate of fair value as of June 30, 2008.

5. Please revise your disclosures in the Critical Accounting Policies and Estimates section on page 25 in future filings to include disclosures relating to the significant management estimates relating to the valuation of the auction rate securities. Include a discussion of the factors that could result in you being required to record a reduction in the value of the auction rate securities assets on your balance sheet, including those situations that could result in you recording a realized loss on your income statement.

Note (4) Business Combination, page 8

6. In view of the significant acquired in-process research and development write-off, please revise your footnote disclosures in future filings to state the significant appraisal assumptions, such as the period in which material net cash inflows from significant projects are expected to commence and anticipated material changes from historical pricing, margins and expense levels. Describe each individually significant project acquired and disclose the anticipated cost and time of completion.
7. In future filings until all acquired projects have been completed or discontinued, please revise to include a discussion in MD&A of each significant project. Discuss the status of each project that you acquired, including how actual results have compared to the assumptions underlying your appraisal. Material variations from your underlying projections and assumptions should be disclosed and their reasons and potential impact explained in future filings.

Form 8-K/A filed September 19, 2008

8. We note you used independent valuation specialists to assist in determining the fair values of a significant portion of the assets acquired as part of the Kensey Nash Endovascular Business. Please tell us about the nature and extent of the third party's involvement in your decision-making process associated with the valuation of the assets acquired.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses 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 your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an

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informed investment decision. 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 connection with responding to our comments, please provide, in writing, a 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
- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Lynn Dicker, Staff Accountant, at (202) 551-3616 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief