



DIVISION OF  
CORPORATION FINANCE

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

August 31, 2011

Via facsimile

Raanan Cohen  
President and Chief Executive Officer  
Orbotech Ltd.  
Sanhedrin Boulevard  
North Industrial Zone  
Yavne 81101, Israel

**Re: Orbotech Ltd.**  
**Form 20-F for the year ended December 31, 2010**  
**Filed February 24, 2011**  
**File No. 000-12790**

Dear Mr. Cohen:

We have reviewed your filing 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 filing, 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 filing and the information you provide in response to these comments, we may have additional comments.

Form 20-F for the Year ended December 31, 2010

Item 5. Operating and Financial Review and Prospects, page 37

5.B. Liquidity and Capital Resources, page 57

Certain Non-GAAP Information, page 60

1. We note your disclosure that you believe your presentation of these non-GAAP measures facilitates comparisons between periods because they exclude certain unusual financial expenses and non-recurring income items. However, we see from your reconciliation on page 62 that you eliminate the amortization of intangible assets and equity based compensation expenses, among other items, which appear to be recurring in nature. In light of the guidance in Item 10(e) of Regulation S-K, please tell us your reasons for disclosing that your non-GAAP measures exclude certain unusual expenses and non-recurring income items.

Note 8 – Commitments, Contingent Liabilities and Restriction Placed in Respect of Liabilities, page F-27

b. Contingent Liabilities, page F-27

(ii) Litigation, page F-28

2. We note your disclosure with regards to the claim filed in the district court of Tel Aviv that no accrual has been made for loss contingency. Please tell us if there is at least a reasonable possibility that a loss may have been incurred and your reasons for such conclusion. Please note that for unrecognized contingencies that meet the criteria in paragraph 3 of ASC 450-20-50 you are required to disclose (i) the nature of the contingency, and (ii) an estimate of the possible loss or range of loss or provide a statement that such an estimate cannot be made. Please revise your disclosure in future filings to provide the required disclosure, if applicable.
3. We note your discussion on page 20 regarding the accident that occurred on November 15, 2010 at your Korean facility, but we note that you did not provide disclosures related to this matter in the notes to your financial statements. Please tell us how you considered the guidance in ASC 450 (formerly SFAS 5) in determining that disclosure as it relates to this matter was not required.

Note 10 – Taxes on Income, page F-36

h. Uncertain Tax Positions, page F-42

4. We note the significant increase in your unrecognized tax benefits in 2010. Please provide us with an explanation of the factors that caused this increase, and revise future filings accordingly.

Note 11 – Financial Instruments and Risk Management, page F-42

c. Fair Value of Financial Instruments, page F-43

5. We see that you have determined the fair value of your derivative liabilities using level 2 inputs. Considering the significant variables that are used to value derivative instruments please specifically tell us how you concluded that the inputs represent fair value measurements that fall within level 2 in the fair value hierarchy. We refer you to FASB ASC 820-10-35.

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 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.

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You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3212 if you have any questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

/s/ Jeffrey Jaramillo

Jeffrey Jaramillo  
Accounting Branch Chief