

Via Facsimile and U.S. Mail
Mail Stop 6010

June 27, 2007

Mr. Patrick J. Balthrop
President and Chief Executive Officer
Luminex Corporation
12212 Technology Blvd.
Austin, TX 78727

**Re: Luminex Corporation
Form 10-K for Fiscal Year Ended December 31, 2006
Form 10-Q for the Quarterly Period Ended March 31, 2007
File No. 0-30109**

Dear Mr. Balthrop:

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. In our comments, we ask you to provide us with more 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 filings. We look forward to working with you in these respects. We welcome any questions you may have about our comment 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 for the fiscal year ended December 31, 2006

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Estimates, page 33

1. Although you discuss numerous estimates and the nature of the uncertainties underlying these estimates, you do not appear to discuss or quantify the related variability in operating results that has occurred or you expect to be reasonably likely to occur. For each of your identified critical accounting policies and estimates please provide us in a disclosure-type format revised disclosure that:
 - quantifies the changes in your estimates that you recorded during each of the periods covered in your filing; and

- quantifies the expected reasonably likely variability of your estimates as of the latest balance sheet date presented in your filing.

Notes to Consolidated Financial Statements

Note 1: Description of Business and Summary of Significant Accounting Policies

Earnings Per Share, page 51

2. Please provide us in disclosure-type format a revised policy disclosure that clearly indicates how you treat your contingently returnable restricted stock awards for both basic and diluted earnings per share purposes. Please see paragraphs 10 and 30 of SFAS 128.

Form 10-Q for the quarterly period ended March 31, 2007

Notes to Condensed Consolidated Financial Statements

Note 2: Acquisitions, page 4

3. You disclose that immediately subsequent to your acquisition of Tm Bioscience you retired approximately \$13.2 million of its debt including approximately \$1.0 million of related fees. It appears from adjustment number eight to your pro forma statement of operations filed as an Exhibit to your Form 8-K/A on May 9, 2007 that the "related fees" include a prepayment penalty. It is unclear how you and Tm Bioscience accounted for this prepayment penalty. Please provide us in a disclosure-type format revised disclosure that indicates the nature of the \$1.0 million in fees and indicates how you accounted for them in your consolidated financial statements. Please reference for us separately the authoritative literature you relied upon to support your accounting.
4. You disclose that you recorded \$64.6 million in goodwill related to the Tm Bioscience acquisition and that this goodwill is subject to adjustment over the next three quarters for, among other things, recording of all transaction related costs, the allocation of the purchase price based on an expert valuation of Tm Bioscience's assets and liabilities and the evaluation of potential impairment of the remaining goodwill balance. Please address the following comments:
 - a. It is unclear from your disclosure whether you reflect all tangible and intangible assets and liabilities of Tm Bioscience at fair value or whether you merely recorded the excess of the purchase price over the historical book value of Tm Bioscience as goodwill subject to the completion of your expert valuation of Tm Bioscience's assets and liabilities. It appears from your pro forma financial statements filed with your May 9, 2007 Form 8-K/A that you have yet to identify intangible assets not recorded on the books of Tm Bioscience. Please provide us in a disclosure-type format revised disclosure that clearly identifies all material tangible and intangible assets and liabilities and reflects your preliminary estimate of their fair values as required by

- paragraph 35 of SFAS 141 including acquired in-process research and development, as may be required by paragraph 42.
- b. Please provide in a disclosure-type format revised disclosure that indicates the nature of the transaction costs you still expect to incur related to this acquisition and explains why you have yet recorded these costs. Separately reference for us the authoritative literature you rely upon to support your accounting and disclosure.
 - c. Please represent to us that when you complete your valuation of all the assets and liabilities of Tm Bioscience that you will disclose the name of the independent valuation expert and have them provide their consent in any Securities Act registration statement into which the periodic report is incorporated by reference. Otherwise, please remove all reference and implication to an independent valuation expert in the disclosure-type format revisions you provide us and represent to us that you will not refer to or imply reference to an expert or consultant in future filings under the Exchange Act.
 - d. Regarding your reference "...evaluation of potential impairment of the remaining goodwill balance..." please clarify for us in disclosure-type format whether you are merely indicating the requirement to test goodwill for impairment annually and at dates between annual tests as indicated in paragraphs 26 and 28 of SFAS 142 or, whether as of March 31, 2007 or as of the date you filed your Form 10-Q, certain events occurred or circumstances changed that would more likely than not reduce the fair value of the reporting unit below its carrying amount. If the latter, please clarify for us again in disclosure-type format that you tested the goodwill for impairment following paragraphs 19 through 22 of SFAS 142 and that no impairment was necessary.
 - e. Please provide in disclosure-type format revised disclosure that identifies why you expect to take up to three quarters to finalize your purchase accounting allocation. In this regard, paragraph B183 of SFAS 141 indicates that the allocation period should not be unreasonably extended and you make no disclosure of any preacquisition contingencies or unusual reasons as to why an valuation report of the identified assets and liabilities of Tm Bioscience should take one year to complete.

Note 7: Segment Information, page 9

- 5. In Note 2 you disclose that you classify the business acquired from Tm Bioscience in your Assay Segment. Please explain to us why it appears that you include the goodwill from this acquisition as an asset of the Technology Segment. Please refer to paragraphs 29, 31 and 32 of SFAS 131 regarding segment asset disclosures and provide us revised disclosure, as necessary.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Contractual Obligations, page 18

6. Please provide us in a disclosure-type format a revised contractual obligation table that includes your principal and interest payments associated with your long-term debt acquired from Tm Bioscience.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit a letter that keys your responses to our comments and provides the requested information. Detailed letters greatly facilitate our review. Please furnish your letter to us via EDGAR under the form type label CORRESP.

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 your letter, 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.

If you have any questions, please contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant