



DIVISION OF  
CORPORATION FINANCE

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

February 14, 2013

Via E-mail

Ms. Jacqueline Lemke  
President and Chief Executive Officer,  
Chief Financial Officer and Vice President-Finance  
Bioanalytical Systems, Inc.  
2701 Kent Avenue  
West Lafayette, IN 47906-1382

**Re: Bioanalytical Systems, Inc.  
Item 4.01 Form 8-K  
Filed February 12, 2013  
File No. 000-23357**

Dear Ms. Lemke:

We have reviewed your filing and have the following comments.

Please respond to this letter within five business days by amending your filing or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your response to our comments.

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

Item 4.01 Changes in Registrant's Certifying Accountant

(a) Dismissal of Previous Independent Registered Public Accounting Firm, page 2

1. Please confirm that you will amend this Item 4.01 8-K to:
  - Disclose the effective date of the dismissal of Crowe Horwarth LLP once they have completed their review services for the quarterly period ended March 31, 2013; and
  - Update the interim period related to paragraphs (a)(1)(iv) and (a)(2) of Item 304 of Regulation S-K through the effective date of dismissal.

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2. Upon amending your filing, please include, as Exhibit 16, an updated letter from your former accountants, Crowe Horwarth, LLP, addressing the revised 8-K disclosure, as required by Item 304(a)(3) of Regulation S-K.

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
- 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.

If you have any questions, please call Keira Nakada, Staff Accountant, at (202) 551-3659.

Sincerely,

/s/ Gus Rodriguez

Gus Rodriguez  
Accounting Branch Chief