



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 3030

May 6, 2010

Via Mail and Facsimile 011-49-241-8909-445

Mr. Wolfgang Breme  
Chief Financial Officer  
Aixtron Aktiengesellschaft  
Kaiserstr. 98  
52134 Herzogenrath  
Federal Republic of Germany

**Re: Aixtron Aktiengesellschaft**  
**Form 20-F for the Fiscal Year Ended December 31, 2009**  
**Filed March 10, 2010**  
**File No. 000-51196**

Dear Mr. Breme:

We have reviewed your response dated April 29, 2010 and filing and have the following comments. Where indicated, we think you should revise your documents 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 20-F for the Fiscal Year Ended December 31, 2009

Item 15. Controls and Procedures, page 63

1. We note your responses to prior comments 2, 4, 5, 6, and 15. Please amend this filing and your 2008 Form 20-F to include the revised disclosures and certifications, as applicable, similar to the proposed disclosures included within your responses.
2. We note your response to prior comments 2 and 4. Please tell us how you have considered whether management's failure to include your independent registered accounting firm's attestation report on the effectiveness of your internal control over financial reporting as of December 31, 2009 and December 31, 2008 and how management referred to "US GAAP" within its report on the effectiveness of your internal control over financial reporting impacted your conclusions regarding the effectiveness of your disclosure controls and procedures as of the end of the fiscal year covered by the report and revise your disclosure as appropriate. In this regard, discuss how you have considered the definition of disclosure controls and procedures provided in Rule 13a-15(e), which indicates that effective controls and procedures would ensure that information required to be disclosed by the issuer is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms. Please also note the guidance in Compliance and Disclosure Interpretation 115.02, which you can find at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.

Financial Statements, page F-1

Consolidated Income Statements, page F-1

3. While we note your disclosure of depreciation, amortisation and employee benefit expenses, please also discuss your consideration of disclosing additional information on the nature of expenses to meet the objectives of the statement.

Note 2. Significant Accounting Policies, page F-6

-(a). Companies Included in Consolidation, page F-6

4. We note your response to prior comment 8. To help us understand the impact of your accounting, please provide us with a comprehensive materiality analysis (qualitative and quantitative) indicating that the impact of not consolidating these subsidiaries is not material for each reporting period presented. Include a comparison of all the major balance sheet and statement of operations captions for each period. Please also address whether any individual entity was material.

Mr. Wolfgang Breme  
Aixtron Aktiengesellschaft  
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As appropriate, please amend your December 31, 2008 and December 31, 2009 Forms 20-F and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments 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 amendments and responses to our comments.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3604 if you have any questions. In this regard, do not hesitate to contact Kevin Vaughn, Accounting Branch Chief, at (202) 551-3643 with any questions.

Sincerely,

Kate Tillan  
Assistant Chief Accountant