



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 3030

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

May 29, 2009

John J. Ehren  
Senior Vice President and Chief Financial Officer  
Key Technology, Inc.  
150 Avery Street  
Walla Walla, Washington 99362

**Re: Key Technology, Inc.**  
**Form 10-K for the fiscal year ended September 30, 2008**  
**Filed December 12, 2008**  
**File No. 000-21820**

Dear Mr. Ehren:

We have reviewed your response dated May 14, 2009 and have the following comment. Where indicated, we think you should revise your document in future filings in response to this comment. 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 our comment, 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 comment or on 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 September 30, 2008

Financial Statements and Supplementary Data, page 34

Notes to Consolidated Financial Statements, page 43

6. Investment in Joint Venture, page 50

1. We note that in response to prior comment 1 you re-evaluated your application of Condition 3 of the significant subsidiary test set forth in Rule 1-02(w) of

Regulation S-X for the year ended September 30, 2006, and concluded that your investment in InspX LLC was significant under Rule 3-09 of Regulation S-X and that separate audited financial statements of InspX LLC were required for fiscal 2006. However, you indicate that the InspX LLC fiscal 2006 financial statements, which you omitted in good faith, are not now relevant and informative to the your investors. Please note that all requests for accommodations or waivers not to file required financial statements must be submitted to the Division of Corporation Finance Office of the Chief Accountant. Accordingly, please either submit a written request to that office or file the required financial statements. Any waiver request should explain in detail the reasons why you believe the financial statements would not provide relevant information to investors.

\* \* \*

As appropriate, please respond to this comment within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please submit your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your responses to our comment.

Please contact Jay Webb at (202) 551-3603 or me at (202) 551-3554 if you have any questions regarding this comment on the financial statements. Please contact Celia Soehner at (202) 551-3463 if you have any other questions.

Sincerely,

Angela Crane  
Accounting Branch Chief