



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 3030

June 1, 2010

Via U.S. Mail and Facsimile to (408) 635-4985

Mark Gallenberger  
Chief Financial Officer  
LTX-Credence Corporation  
1355 California Circle  
Milpitas, CA 95035

**Re: LTX-Credence Corporation  
Form 10-K for the Fiscal Year ended July 31, 2009  
Filed October 15, 2009  
File No. 000-10761**

Dear Mr. Gallenberger:

We have reviewed your response dated May 14, 2010 and have the following comment. Where indicated, we think you should revise your 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 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 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 July 31, 2009

Financial Statements and Supplementary Data, page 43

Note 2. Summary of Significant Accounting Policies, page 48

Cash and Cash Equivalents and Marketable Securities, page 53

1. We note your response to prior comment 2 and the information you plan to include in your future filings, if material. In future filings, please also revise this note to clearly indicate that your cash equivalents include reverse repurchase agreements and, consistent with the information included in the first bullet to your response, disclose a brief description of the transactions and your business reasons for undertaking them. Further, disclose how you account for and record the transactions on your books – for example, if true, you could disclose that you account for the transactions as collateralized financing transactions carried on your books at the amounts at which the securities will be sold (the amounts advanced), plus any accrued interest.

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 that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comment.

You may contact Kevin Kuhar, Staff Accountant, at (202) 551-3662 or me at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or Geoff Kruczek at (202) 551-3641 if you have questions on other comments. In this regard, do not hesitate to contact Jeff Jaramillo, Accounting Branch Chief, at (202) 551-3212 with any questions.

Sincerely,

Jay Webb  
Accounting Reviewer