



DIVISION OF
CORPORATION FINANCE

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

December 3, 2010

Via Facsimile and U.S. Mail

Mr. James G. Thomasch, Chief Financial Officer
PLC Systems Inc.
10 Forge Park
Franklin, Massachusetts 02038

**Re: PLC Systems Inc.
Preliminary Proxy Statement on Schedule 14A
Filed November 18, 2010
File No. 1-11388**

Dear Mr. Thomasch:

We have limited our review of your filing to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Schedule 14A Filed November 18, 2010

Balance Sheet Data, page 67

1. We note adjustment (a) includes an assumed payment for collection of trade receivables of \$329,000. We further note that you are not transferring the accounts receivable to the buyer. Tell us why you believe this adjustment meets the criteria for pro forma adjustment under Rule 11-02(b)(6) of Regulation S-X or revise to remove such adjustment from your presentation.
2. Please provide further description for the other adjustments totaling \$541,000 discussed in note 2(f). Tell us how each of these adjustments meet the criteria for pro forma

adjustments under Rule 11-02(b)(6) of Regulation S-X or revise to remove such adjustments from your presentation.

Statement of Operations Data, page 68

3. We note the description of your TMR business and the related terms of sale of the TMR assets. If the proposed disposal qualifies as a discontinued operation, pro forma operating information should be presented for each of the past two years. Please revise to provide such information or tell us why such information is not required. Refer to interpretations of the Staff set forth in the Division of Corporation Finance's July 2001 Interim Supplement to Publicly Available Telephone Interpretations, Section H6 at: <http://sec.gov/interps/telephone/phonesupplement3.htm>

Consolidated Financial Statements, page F-1

4. If authorization is sought from security holders for disposition of a significant business, unaudited financial statements of that business should be provided in the proxy materials for the same periods as are required for the Registrant. Please provide such unaudited financial statements for the TMR business, or tell us why such financial statements are not required. Refer to the requirements of Rules 11-01(b)(2) and 11-01(d) of Regulation S-X and the interpretations of the Staff set forth in the Division of Corporation Finance's July 2001 Interim Supplement to Publicly Available Telephone Interpretations, Section H6 at: <http://sec.gov/interps/telephone/phonesupplement3.htm>

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.

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.

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You may contact Gary Newberry at (202) 551-3761 or Kevin Vaughn, Accounting Branch Chief, at (202) 551-3643 if you have questions regarding the above comments. In this regard, do not hesitate to contact me (202) 551-3671.

Sincerely,

Martin James
Acting Assistant Director