



DIVISION OF
CORPORATION FINANCE
Mail Stop 3030

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

May 31, 2011

VIA U.S. MAIL and FACSIMILE

Raymond A. Link
Chief Financial Officer
FEI Company
5350 NE Dawson Creek Drive
Hillsboro, Oregon 97124-5793

Re: FEI Company
Form 10-K for the fiscal year ended December 31, 2010
Filed February 18, 2011
File No. 000-22780

Dear Mr. Link:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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.

Form 10-K for the fiscal year ended December 31, 2010

Liquidity and Capital Resources, page 38

1. You disclose that as of December 31, 2010, you have cumulative unremitted earnings of foreign subsidiaries of \$86.5 million which is indefinitely reinvested in your foreign operations. If significant to an understanding of your liquidity, please clarify the amount of cash and cash equivalents and investments held outside of the U.S. in future filings. Additionally, to the extent material, please describe any significant amounts that may not be available for general corporate use related to cash and investments held by foreign subsidiaries where you consider earnings to be indefinitely invested. We refer you to Item 303(a)(1) of Regulation S-K and Section IV of SEC Release 33-8350.

Consolidated Financial Statements

Consolidated Statements of Cash Flows, page 56

2. Please tell us how you have presented the cash retained for excess tax benefits of share based compensation arrangements within the statement of cash flows. Please refer to FASB ASC 230-10-45-14.

Note 19. Commitments and Contingent Liabilities, page 84

3. Regarding the patent litigation with Hitachi, please revise future filings to include an estimate of the possible loss or range of loss or a statement that such an estimate cannot be made. We note the statement that the resolution of the case could be material to net income or cash flows of a particular period. Refer to FASB ASC 450-20-50-4.

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;

Raymond A. Link
FEI Company
May 31, 2011
Page 3

- 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.

You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. If you have any other questions, please do not hesitate to contact Martin James, Senior Assistant Chief Accountant at (202) 551-3671.

Sincerely,

Brian Cascio
Accounting Branch Chief